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**The International Comet Quarterly** (*ICQ*) is a journal devoted to news and observation of comets, published by the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. Regular issues are published 4 times per year (January, April, July, and October), with an annual *Comet Handbook* of ephemerides published normally in the first half of the year as a special fifth issue. An index to each volume normally is published in every other January issue (even-numbered years); the *ICQ* is also indexed in *Astronomy and Astrophysics Abstracts* and in *Science Abstracts Section A*.

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Cometary observations also should be sent to the Editor in Cambridge; all data intended for publication in the *ICQ* that is not sent via computer electronic mail should be sent on standard *ICQ* observation report forms, which can be obtained upon request from the Editor. Those who can send observational data (or manuscripts) in machine-readable form are encouraged to do so [especially through e-mail via the computer networks *SPAN* (CFAPS2::GREEN), *BITNET* (GREEN@CFA), or Internet (GREEN@CFA.HARVARD.EDU), or via floppy disks that can be read on an IBM PC], and should contact the Editor for further information.

Among the Observation Coordinators (OCs) listed below, those with postal addresses have e-mail contacts with the *ICQ* Editor (or regularly send data to the Editor on IBM PC-compatible floppy disks); observers in the general area of such OCs who lack access to e-mail networks may send data to the OC for relay to the *ICQ* in electronic form.

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# — Notes of Interest —

The tenth edition of the *Catalogue of Cometary Orbits* has recently been issued as a joint publication of the International Astronomical Union's Central Bureau for Astronomical Telegrams and Minor Planet Center. It contains a complete list of the new-style designations for comets, vs. the old. The price is US$20.00 (US$30.00 for airmail delivery), with checks payable to "Minor Planet Center". For further information, contact the Minor Planet Center, M.S. 18, Smithsonian Observatory, 60 Garden St., Cambridge, MA 02138, U.S.A. (e-mail IAUSUBS@CFA.HARVARD.EDU).

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**ACM 1996.** The Sixth Asteroids, Comets, Meteors Conference will be held in Versailles, France, during 1996 July 8-12. The meeting co-sponsors include the European Space Agency and various French organizations. The tremendously successful ACM series was begun in Uppsala, Sweden, as a means to bring together scientists in the related disciplines of comet, minor-planet, and meteor studies. The co-organizers, A.-Chantal Levasseur-Regourd and Marcello Fulchignoni, note that special emphasis will be given at the 1996 meeting to "science through space missions and to impacts on planets and their atmospheres". For further information, contact Levasseur-Regourd at e-mail aclr@aerov.jussieu.fr (postal address c/o Aeronomie CNRS; Univ Paris 6; BP 3; 91371 Verrieres; France).

# The Light Curve of 71P/Clark

*Charles S. Morris*

Associate Editor, ICQ

*Abstract. This year, 71P/Clark is making its fifth recorded apparition. The light curve of 71P/Clark's 1984 apparition, the only one with extensive visual observations, is analyzed in detail. Two other apparitions, including the current apparition, provide early pre-perihelion observations to supplement the 1984 data. The comet's light curve displays a rapid pre-perihelion increase in brightness between −225 and ∼ −30 days. During this period the comet's brightness increases roughly 0.027 magnitude per day. This is followed by a period of 50-60 days of nearly constant heliocentric brightness. After perihelion plus 30 days, the comet fades at a rate of approximately −0.016 magnitude per day. The period from −23 days to +114 days is represented reasonably well by the power-law formula 8.43 + 16.45 log r. This formula is used to forecast the comet's brightness for the current apparition.*

71P/Clark was discovered photographically on 1973 June 9 by Michael Clark (Mount John University Observatory, New Zealand) as a 13th magnitude object. At that time, the comet was already past perihelion. The orbit of 71P/Clark is almost exactly 5.5 years, which means that every other apparition is favorable. Thus, it wasn't until 1984 that any known visual observations were made. In 1984, four observers reported a total of 28 visual observations covering a 136-day period. These observations give a consistent picture of the brightest phase of 71P's light curve. By combining the visual data with eight non-visual observations obtained in 1978 and early in the current apparition, a more complete picture of 71P/Clark's light curve emerges.

### The Magnitude Data

All the magnitude data used in this study, with the exception of six estimates, were obtained from *The International Comet Quarterly* (*ICQ*; Numbers 51-54 for the 1984 apparition, 71 for the 1989 apparition, and 93 for the 1995 apparition). In addition to the *ICQ* data, four photographic magnitudes near the time of recovery in 1978 were obtained from *IAUC* 3216. Two of the 1995 observations by A. Nakamura were obtained from *MPC* 24784. It should noted that the discovery apparition did not provide any unique data and thus, no observations were included from 1973. A single visual observation in 1989, made by David Levy with a large professional telescope when the comet was at a large heliocentric distance, is inconsistent with data from the other apparitions and was not included in the present study. This observation, and the concurrent CCD observation, will be evaluated in the near future. If the results of this investigation prove interesting, they will be reported on in a future issue of the *ICQ*. The observers included in the present study are summarized in Table 1.

It should be noted that the small number of observers and observations in 1984 must be due to the comet's relative faintness (peak magnitude ∼ 10.5) and its southerly declination. Of the four observers, the two observing from the northern hemisphere (Hale and Morris) were observing from southern California. The comet was lost to observers at higher northern latitudes when it was bright. *(text continued on page 50)*

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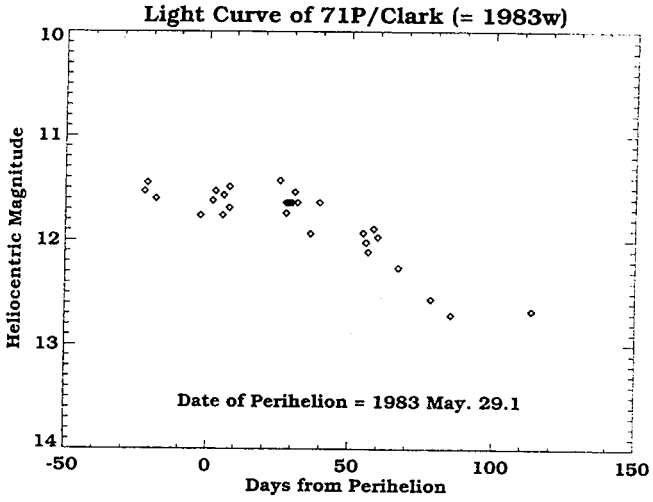
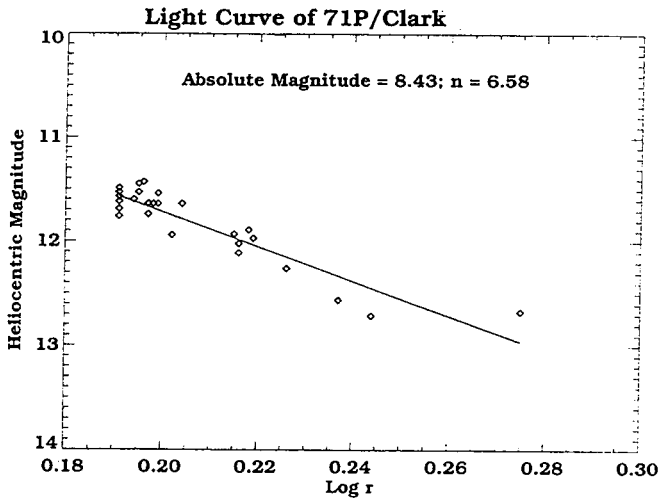
**TABLE 1. Summary of 71P/Clark Observers**

| Observer | Number of Observations 1978 | 1984 | 1995* | Type of Observation |
|---|---|---|---|---|
| M. L. Clark (CLA) | - | 4 | | visual |
| A. Hale (HAL) | - | 5 | | visual |
| C. S. Morris (MOR) | - | 5 | | visual |
| A. Nakamura (NAKO1) | - | - | 4 | CCD |
| A. Pearce (PEA) | - | 14 | | visual |
| T. Seki | 3 | - | | photo |
| G. Schwartz and C.-Y Shao | 1 | - | | photo |
| Total | 4 | 28 | 4 | |

*Observations to date




*Figures 1 (left) and 2 (right).*

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## The 1984 Apparition

The 1984 visual data are extremely consistent and required no special corrections for specific observers. Perhaps this is because the comet was small (always reported as 2′ or less) and moderately condensed (DC typically 3-5). The data for the 1984 and the other apparitions were reduced assuming no aperture correction.

Figure 1 illustrates the visual light curve for the 1984 apparition as a function of time. From the time it was first observed visually (–22 days) until approximately 30 days after perihelion, the comet's heliocentric brightness is nearly constant. (Of course, log $r$ is changing very little, as well.) After this period of constant heliocentric brightness, the comet fades at a rate of roughly –0.016 magnitude per day.

When plotted as a function of log $r$ (see Figure 2), it can be seen that these data can be represented reasonably well using a power-law formula. A least squares fit to the 24 observations gives the following parameters (with probable errors): absolute magnitude ($H$) = 8.43 ± 0.20, $n$ = 6.58 ± 0.38.

## The Composite Light Curve

Figure 3 shows a composite light curve with data from three apparitions included. In addition to the visual estimates from 1984, the photographic (from 1978) and CCD pre-perihelion observations (from 1994-95) are displayed. This figure confirms that 71P/Clark has a typical light curve for a periodic comet — a rapid pre-perihelion increase in brightness is followed by a slow post-perihelion decline.

The pre-perihelion brightness increases at a rate of about 0.027 magnitude/day, nearly twice the rate of the post-perihelion decline. As indicated by the 1984 visual data, the comet's peak heliocentric brightness is approximately constant for 50-60 days, centered on perihelion. *(text continued on page 51)*

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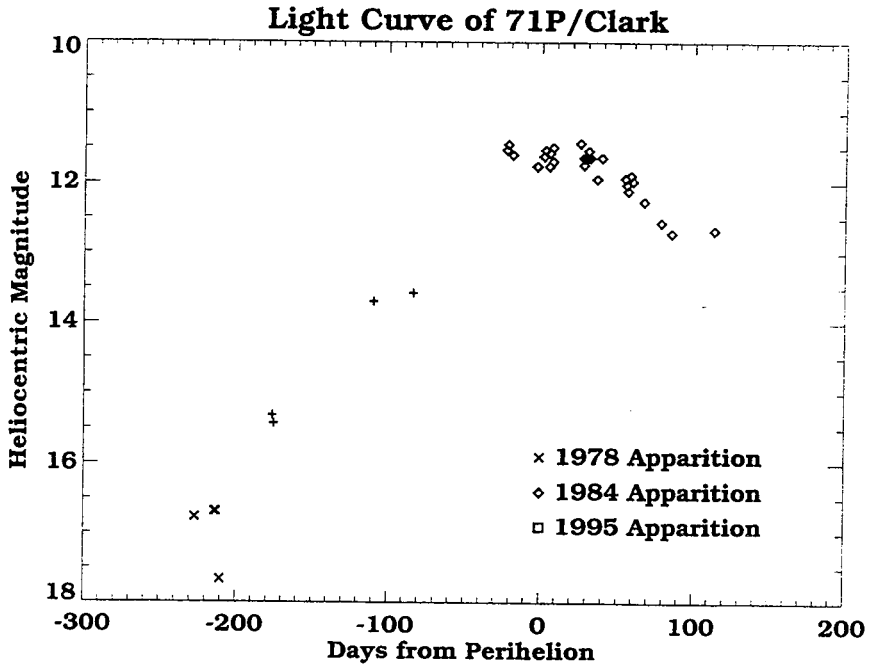


*Figure 3.*

**Prospects for 1995**

The 1995 apparition of 71P/Clark will be very similar to the comet's appearance in 1984. Table 2 summarizes the comet's predicted magnitude based on the power-law formula given above. As can be seen, the comet's apparent brightness is expected to change very slowly from May through July 1995. The comet should reach its peak brightness in June at magnitude $\sim$ 10.6, at which time the comet will be south of declination $-30°$.

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**TABLE 2. 71P/Clark 1995 Magnitude Prediction**

| Date (1995) | Predicted Magnitude |
|---|---|
| May 3 | 11.3 |
| 13 | 11.1 |
| 23 | 10.9 |
| Jun. 2 | 10.7 |
| 12 | 10.6 |
| 22 | 10.6 |
| Jul. 2 | 10.7 |
| 12 | 10.8 |
| 22 | 11.0 |
| Aug. 1 | 11.2 |
| 11 | 11.6 |
| 21 | 11.9 |
| 31 | 12.3 |
| Sep. 9 | 12.7 |
| 19 | 13.1 |
| 29 | 13.5 |

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# 25th Annual Comet Conference in Japan

*Akimasa Nakamura*

ICQ Observation Coordinator for Japan

The 25th Comet Conference of Japan was held on March 25-26 in Kumamoto City on the island of Kyushu. Due to the Great Hanshin Earthquake, the participants (about 60) were fewer than in previous years. At the meeting, two lectures (one by a professional astronomer), and some talks were presented. Many useful discussions occurred during the free time.

**1. Lectures**

J. Watanabe, National Astronomical Observatory of Japan, talked about the collision of D/1993 F2 (Shoemaker-Levy 9) and Jupiter. Watanabe, the author of two books concerning the collision, conducted the observations using a newly-developed infrared CCD camera 'OASYS' and the 188-cm reflector at the Okayama Astrophysical Observatory. Some interesting results obtained by his team and many other observatories were presented.

S. Nakano, *ICQ Comet Handbook Editor*, talked about some recent topics in comet observations. As for comet astrometry, Japanese amateurs reported about 28 percent of the total during last year. He also suggested that some bright (20th magnitude or brighter) trans-Neptunian objects could be discovered near the Milky Way, where no professional survey has been carried out yet.

**2. Talks**

At first, I talked about how to estimate the Degree of Condensation (DC) on a CCD image. Using a CCD, the gradient of surface brightness of coma can be easily determined, and this should be the substitute of DC for CCD observations, because the impression on a TV monitor might give a very subjective result.

S. Kashiwagi, Hoshi-no-Hiroba, presented a small review about the split events of comet nuclei. K. Ito, Sengamine Astronomical Observatory, researched the damage of astronomical facilities by the Hanshin Earthquake. A map, on which the location and the degree of damage were plotted, clearly shows that it was a terrible disaster for the observatories in/around Kobe. *(text continued on page 52)*

T. Tsuyashima, Kumamoto Civil Astronomical Observatory (KCAO), spoke about the observation of the collision of the comet and Jupiter. His team succeeded in obtaining some methane-band images at the wavelength of 890 nm, using a CCD camera and a 41-cm reflector at KCAO. J. Kobayashi, KCAO, talked about recent comet observations using a CCD camera at KCAO.

A. Miyamoto and T. Oribe, Saji Astronomical Observatory, introduced their observatory, which was built last summer by Saji Village, Tottori. With a 103-cm reflector, the largest one among the public observatories in Japan, they will start photometric/astrometric observations of comets and minor planets soon.

H. Yamaoka, Kyushu University, talked about the F.A.Q. on the collision of the comet and Jupiter, which was translated to Japanese and distributed on domestic computer networks by him.

Three other talks concerning the new designation system were presented. K. Tomita made a general explanation of it. I. Hasegawa talked about the 10th edition of the *Catalogue of Cometary Orbits*, which was newly edited to incorporate the new designation system [see page 48 of this issue — Ed.]. I introduced the new *ICQ* format for reporting photometric data.

The 26th meeting will be held in March 1996 in (or near) Tokyo, but the exact date and place have not fixed yet. If you are interested in attending it, please contact me at P.O. Box 9, Kuma Post Office, Ehime 791-12, Japan (e-mail address GCC00404@niftyserve.or.jp).

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# Comets Found as Part of the Lowell Observatory's Trans-Saturnian Planet Search

*David H. Levy, Brian A. Skiff, and Clyde W. Tombaugh*

Clyde Tombaugh discovered Pluto on 1930 February 18, and a month later when "Object Lowell Observatory" was announced, the world became aware of Lowell Observatory's year-old search program for faint objects at the edge of the solar system. What is not as well known is that Tombaugh continued his search until 1943, expanding it to include any planet brighter than magnitude 17 and farther from the Sun than Saturn.

The Lowell Observatory planet search differed from programs that emphasize relatively fast-moving comets and asteroids. Because Tombaugh was looking for faint, slow-moving distant planets, he spent as long as three weeks scanning a pair of plates under a blink comparator if the plates covered a Milky Way region. He knew that he might not get to some plates for more than a year after he took them. Accordingly, Tombaugh designed his search strategy with sufficient overlap that even if a new planet were as close to the Sun as Saturn (and its orbit of low enough eccentricity), he would still be able to find images of it a year later on other plates. Unfortunately, a nearby object like a comet would most likely be completely lost after such a long interval.

Besides the discovery of Pluto, Lowell Observatory's planet search led to many other interesting finds. New asteroids, some variable stars, and the identities of the distant globular cluster NGC 5694 and a supercluster of galaxies stretching 40° through Pegasus, Andromeda, and Perseus were revealed during the search's long course.

While doing research for his biography of Tombaugh (Levy 1991), David Levy learned that Tombaugh had discovered a comet. Since Tombaugh did not remember when the comet was found, in February 1986 Levy inspected Tombaugh's extensive notes in the archives at Lowell Observatory. After searching a few hours, he found the comet on Tombaugh's search plates taken on 1931 January 11, 12, and 13.

When Tombaugh found the comet more than a year after exposing the plates, he was well aware that it would be close to impossible to recover it; therefore he decided not to report it at the time. This comet was one of only two Tombaugh noted in his entire planet search. In 1986, Skiff and Levy located three more images on plates that had been taken simultaneously with the Cogshall 12.5-cm "witness" camera mounted alongside the main telescope, and exposed by Tombaugh at the same time, as well as a fourth taken a day earlier near the edge of an adjacent field. The positions of this object for 1931 Jan. 11, 12, and 13 were published on *MPC* 24423. The Jan. 10 position is from the 12.5-cm camera and is not very good. Levy and Skiff noticed this faint cometary image on the plate and measured it because it did allow the known arc of positions to be extended by another day. The comet was diffuse, of magnitude 12.5, with strong condensation and a tail at least 2′ long in p.a. ~ 270°.

A subsequent inquiry by Skiff revealed that Carl Lampland and Kenneth Newman (1933), two members of the Lowell Observatory staff at the time, had indeed reported approximate positions of this object as an asteroid (along with positions of numerous other asteroids) to the *Astronomische Nachrichten*, who in turn published it under the asteroid designation 1931 AN. Lampland supervised the planet search project while Tombaugh was away at college, and Newman was assigned the task of making rough measurements of all the asteroids that Tombaugh had discovered on his plates. We do not have the record of correspondence about the 1931 AN report, so we do not know whether the error was made by the editors of *Astronomische Nachrichten* — which would be highly unlikely — or whether the report from Lowell did not record its cometary nature.

Ephemerides from orbital extrapolations by E. Bowell (Lowell Observatory) and B. G. Marsden (Smithsonian Astrophysical Observatory) were used by Levy, at the suggestion of Marsden, to begin a search of the plate collections of a number of observatories around the world, including Harvard and Mount Wilson in the United States, David Dunlap in Canada, Meudon in France, and Heidelberg in Germany. In addition, W. Wentzel checked the collection at Sonneberg Observatory. Although the Heidelberg and Mount Wilson collections had plates centered very close to the comet's position on the appropriate dates, they were not close enough, and Levy did not find any further images of the comet. Unfortunately, the Harvard and Sonneberg collections did not go quite faint enough to record the object.

A parabolic orbit with $q = 0.90$ AU and $i = 6°.6$ was computed from the Jan. 11-13 positions by Marsden (1995a), who notes that the result is in fact not very believable. The low orbital inclination and the comet's intrinsic faintness suggest that the comet may in fact have been of short period.

While examining (in the summer of 1987) other plate envelopes with Tombaugh's notes, in search of a specific asteroid, Skiff found a second (long-forgotten) diffuse object that Tombaugh had marked belatedly on plates taken in September 1931. This second object appeared diffuse and elongated and of magnitude 15. The measured positions for Sept. 12, 16, and 21 were published on *MPC* 24933, and the object recently received the designation D/1931 R1. This comet appeared on three plates taken further apart in time than in the case of C/1931 AN. The sky in September 1931 was clear on more nights than it was for the January observing, and Tombaugh was able to space the exposures over more nights. A preliminary orbit by Marsden (1995b) strongly suggested a short-period nature.

Thanks to the new system for designating comets approved last year by Commission 20 of the International Astronomical Union (cf. Marsden 1995c), it has finally been possible to announce these comets (see also *IAUC* 6161). We hope that readers of this article might know of other contemporary plate collections, and that another image or two of both comets might yet be found. This happy result would lead to more accurate orbits and a better understanding of the travels through the solar system of these visitors to the inner solar system so many years ago.

**Postscript.** As this article was being prepared for press, Reinder Bouma (1995) has suggested that D/1931 R1 might be identical with Comet 84P/Giclas, and calculations by Marsden (1995d) confirmed this to be the case.

## REFERENCES

Bouma, R. J. (1995). *IAUC* 6168.
Lampland C.; and K. Newman (1933). *Astron. Nach.* **249**, 105.
Levy, D. H. (1991). *Clyde Tombaugh: Discoverer of Planet Pluto* (Tucson: University of Arizona Press).
Marsden, B. G. (1995a). *MPC* 24544.
— (1995b). *MPC* 25030.
— (1995c). *ICQ* **17**, 3.
— (1995d). *MPC* 25182.

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# *Letter to the Editor*

*Editor's note: We encourage observers to contribute brief notes for possible publication in the* ICQ *as a way of increasing dialogue on an international basis.*

The first International Workshop on Cometary Astronomy (IWCA) was a great success, and the "Proceedings" issue of the *ICQ* (October 1994) — with your moving article about the history of the *ICQ* and the brief reports of comet-observing groups in various countries — has influenced my decision to create a Ukrainian Comet Section (UCS). This plan has been endorsed by Klim I. Churyumov of the Astronomical Observatory, Kiev University.

With the disintegration of the U.S.S.R., the former Comet Observers Association (*ICQ* code 26) no longer exists; and the creation of the UCS will therefore serve to unify Ukrainian comet observers and work to coordinate their work. As per an agreement with Churyumov, the UCS will be based at the Kiev Astronomical Observatory and will have e-mail capability and a publication, the (Kiev) *Comet Circulars.*

I have contact with many observers in our country via telephone and by post. Support for the UCS has already been expressed by experienced observers such as B. Skorichenko (co-discoverer of comet C/1989 Y1 = O.S. 1989$e_1$), P. Veleshchuk, and others. I will thus be the Observation Coordinator for Ukraine.

*— Alexandr R. Baransky [address on page 48]*

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## — CORRIGENDA —

- In the October 1992 issue, page 101, fourth paragraph, line 8, *for* expexperience *read* experience; also, line 11, *for* subscription *read* prescription
- In the October 1994 issue, page 171, "Periodic Comet Harrington (1994g)", last observation, the date *should read* 1994 10 12.30
- In the January 1995 issue, page 16, second sentence, it is component E that is the "faint smudge near top center" and then "faint component C is just below D."

# Tabulation of Comet Observations

The new tabulation format for observations appears for the first time in this issue. We are still working on an abbreviation scheme for the DC descriptive information (for the new column 55, as noted on page 10 of the January issue of *ICQ*), and hope to announce this in the July issue.

There are still numerous individuals who are contributing data on paper, and for this reason we include on the last page of this issue a new report form for reporting tabulated observations to the *ICQ*. Descriptive information accompanying tabulated observations in this issue that were contributed on paper will appear in the July issue. Please again note the abbreviation "O.S.", used in the *ICQ* to denote the old-style (pre-1995) designation system.

**Descriptive Information (to complement the Tabulated Data):**

◇ *Comet C/1993 A1 (Mueller; O.S. 1993a)* ⟹ 1993 Sept. 5: bright sky due to gibbous moon not very far; MM used is "generally close to Bobrovnikoff's, defocusing the stars to as large as the comet (I defocus with the eyepiece and the eye at the same time, to get rid of the black spot due to the secondary miror in the defocussed star iamges, and to get smoother defocussed star images)" [BIV]. Oct. 9/10: "coma elongated to 6′-7′ between p.a. 270°-340° (tail?)" [BIV]. Oct. 24/25: "start of tails in p.a. 60° and 20° (broader)" [BIV]. 1994 Jan. 14: comet low (altitude 12°) [BIV].

◇ *Comet C/1993 Q1 (Mueller; O.S. 1993p)* ⟹ 1994 Jan. 14: beginning of a 1′ short tail around p.a. 80° [BIV].

◇ *Comet C/1993 Y1 (McNaught-Russell; O.S. 1993v)* ⟹ 1994 Apr. 2: w/ 20.3-cm L (79×), large and diffuse 7′ coma, slightly elongated towards p.a. 90° [BIV].

◇ *Comet C/1994 G1 (Takamizawa-Levy; O.S. 1994f)* ⟹ 1994 May 15: "bright nuclear region" [BIV]. July 6: start of a 2′.5 tail at p.a. 70° [BIV]. 1995 Jan. 31.98: w/ 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD, coma appears stellar; fan-like tail ∼ 5′ in p.a. ∼ 80° [MIK].

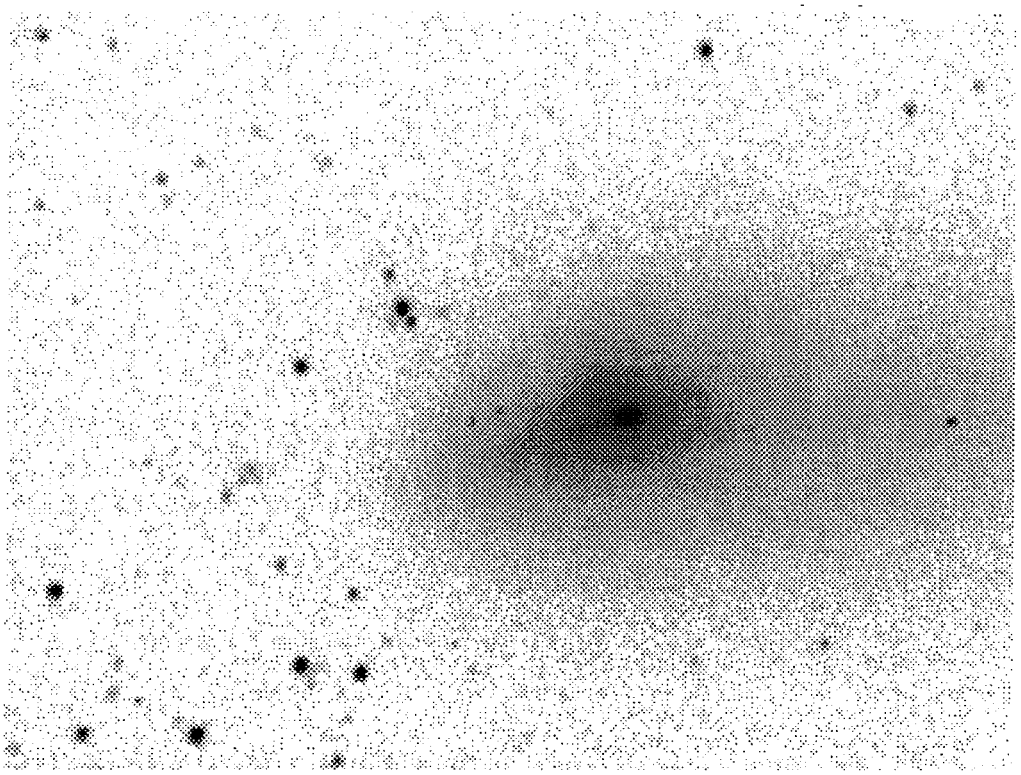
◇ *Comet C/1994 J2 (Takamizawa; O.S. 1994i)* ⟹ 1994 May 13, 15, and 16: possible 2′ tail in p.a. 90° [BIV].

◇ *Comet C/1994 T1 (Machholz; O.S. 1994r)* ⟹ 1994 Nov. 6.41: the comet is significantly more condensed than it was during earlier observations; there is a moderately distinct cond. in the center of the coma; brightness estimate somewhat affected by nearby 8th-mag star [HAL]. Dec. 1.00: no enhancement w/ Lumicon SB-Filter [MEY]. Dec. 3.32: the coma appears as a bright, distinct cond., w/ only a vague diffuseness surrounding it; the tail is straight, vague and featureless [HAL]. Dec. 9.02: stellar cond. visible [SHA02]. Dec. 27.26: possible short tail toward N [MOR]. Dec. 28.46: "not seen as clearly using Swan Band filter" [SEA]. Dec. 30.46: "some interfernce from nearby star" [SEA]. 1995 Jan. 2.19: stellar cond. [MOR]. Jan. 2.83: w/ 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD, star-like 1′.5 central cond. [MIK]. Feb. 1.79: fan-like tail ∼ 2′ long in p.a. 30°-60° [MIK].

◇ *Comet 2P/Encke* ⟹ 1994 Jan. 14: asymmetric coma; prominent 4′ fan from p.a. 265° to 345°, maximum brightness around p.a. 310° [BIV]. Jan. 16: slightly-less-prominent fan of 3′.5, brightest at p.a. 330° [BIV].

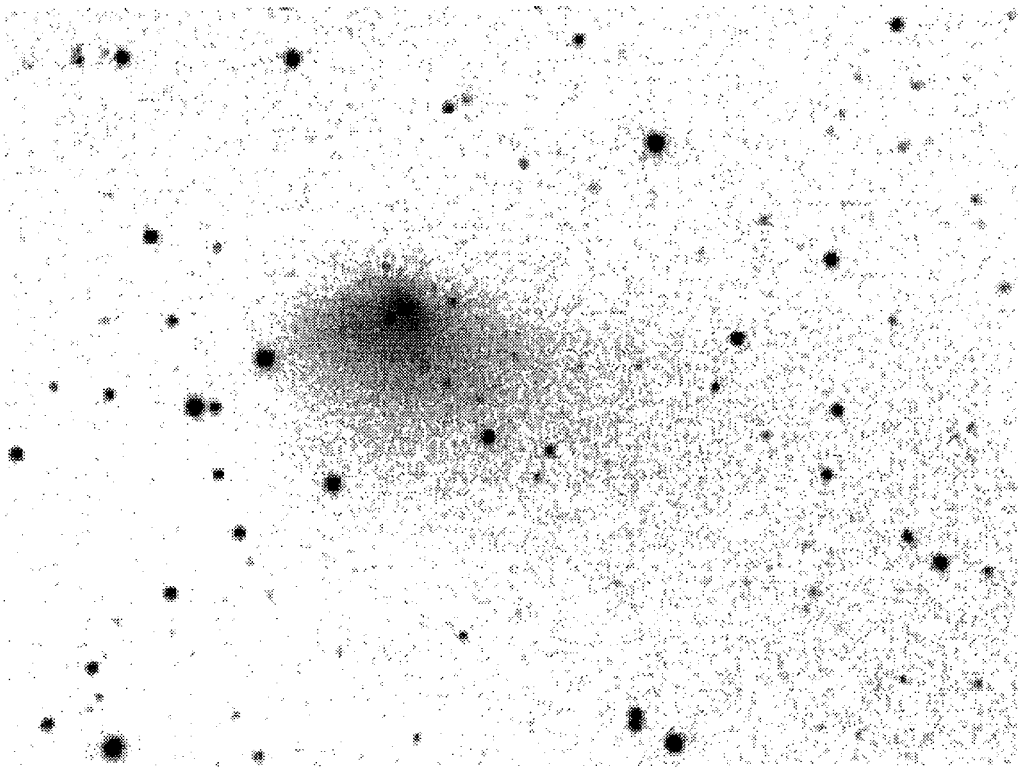
◇ *Comet 9P/Tempel 1 (O.S. 1993c)* ⟹ 1994 Apr. 3: curved jet-like structure of 1′ from p.a. 170° to 245° [BIV]. Apr. 22: 1′ jet-like structure at p.a. 210° [BIV]. May 12, 14, and 15: main jet-like structure of 1′.5 in p.a. 200°-230°; other possible jets 0′.5 in p.a. 300° and 1′ in p.a. 140°-180° [BIV].

◇ *Comet 19P/Borrelly (O.S. 1994l)* ⟹ 1994 Sept. 10.09: Lumicon SB-Filter doesn't enhance the comet [MEY]. Oct. 2.81: TP2415 film w/ 16-cm *f*/3.8 W shows 1′ long spike in p.a. 110°, 2′ long tail in p.a. 270°, and 2′.5 coma [TSU02]. Oct. 14.83: coma dia. 2′ × 4′, elongated E-W [KOB01]. Oct. 15.77: TP2415 film taken as on Oct. 2.81 (above) shows 2′.5 × 4′ coma [TSU02]. Oct. 29.39: the overall telescopic appearance of the coma throughout the comet's apparition — at least, through early February — was that of a broad fan, sharply defined along its N edge, and diffusing out gradually toward the S; a bright ray was seen extending ∼ E from a distinct central cond.; during this particular observation, the coma still appeared somewhat circular, with the cond. off-center toward the N edge — the distinct fan shape not becoming apparent until Nov. — and the estimate was affected by interference from a nearby star of mag ∼ 9 [HAL]. Nov. 1-2: obvious elongated coma, with sharp 1′.5 jet-like structure around p.a. 85°, and a smaller one (40″) around p.a. 40°-60°; main tail at p.a. 280° [BIV]. Nov. 6.44: in addition to the main E ray, up to 3 or 4 additional rays could be seen extending from the central cond. w/ the 41-cm L; one of the two brightest of these extended W (the other extended S and curved toward the E) [HAL]. Nov. 10: C8 telescope (77×) at Pico Veleta (IRAM Radiotelescope, near Granada, Spain) shows still-prominent 2′ jet-like structure around p.a. 90°, with a smaller one of 1′ at p.a. 20° [BIV]. Dec. 1.02: coma seems to be elongated; comet appeared like a galaxy [MEY]. Dec. 2.19: elliptical coma with asymmetrical cond., weak tail [SCH04]. Dec. 3.36: the tail length estimate refers to a broad, featureless structure extending to the W of the fan-shaped coma; this was seen in addition to the bright E-extending ray [HAL]. Dec. 3.86: at 48×, 10′ long anti-tail in p.a. 100° [VIC]. Dec. 6.92: elliptical coma p.a. 260° [SCH04]. Dec. 6.94: clear central cond. [COM]. Dec. 7.94: elliptical coma toward p.a. 270° [SCH04]. Dec. 8.01 and 9.00: stellar cond. visible [LAN03]. Dec. 8.07: clear central cond. [COM]. Dec. 9.09 and 14.25: disk-like cond. visible [LAN03]. Dec. 9.98: elliptical coma with central cond.; weak tail [SCH04]. Dec. 12: sharp 1′.8 jet-like structure still observed at p.a. 115°, with a fainter one of length 1′ at p.a. 20°; sharp tail at p.a. 270° (starting at p.a. 265°) [BIV]. Dec. 14.18: comet close to star of mag 9; weak tail [SCH04]. Dec. 14.18: comet close to star [COM]. Dec. 15.24: elliptical coma with central cond.; weak tail [SCH04]. *[cont. on page 56]*



**Above:** CCD image of Comet 19P/Borrelly, taken with the 65-cm $f/3.6$ reflector at the Ondřejov Observatory on 1994 Dec. 7.23 UT; 60-sec unfiltered exposure. The anti-tail is in p.a. 104° from the central cond.; the broad, normal tail is in p.a. $\sim$ 270° (*i.e.*, almost exactly in the anti-solar direction, which is 271°).

**Below:** Unfiltered CCD image of Comet 19P taken (details as above) on 1995 Mar. 11.08. Integration time 120 sec. Note the fan-like tail structure, whose edges are at p.a. 112° and 215° (the former edge probably corresponds to the anti-tail seen in Nov. and Dec. 1994); the faint and broad tail extends up to the image's edge in p.a. $\sim$ 235°; the anti-solar direction is in p.a. 143° (*i.e.*, inside the fan-like tail). The fields of view are 12′.7 × 9′.6 (pixel size 2″.0), with north up and east to the left *[images courtesy of Petr Pravec].*



*[cont. from page 54]* Dec. 27.29: in 26-cm L, tail expanded away W from the coma and was diffuse; anti-tail was better defined, but still diffuse, and spike-like [MOR]. Dec. 29.29 and 1995 Jan. 2.21: in 26-cm L, tail expanded away W from the coma and was diffuse; anti-tail was sharper and spike-like [MOR]. Dec. 31.17: "comet almost invisible in Lumicon Premium Swan-Band Filter" [SPR]. Dec. 31.76: at 117×, 6′ long anti-tail in p.a. 130° [VIC].

1995 Jan. 1.81: anti-tail 0°.04 long [HOR02]. Jan. 2.12: at 230×, 3′.5 long anti-tail in p.a. 140°; tail is 30° wide in p.a. 270° to 300°; bright filament in the tail at p.a. 275° [SAR02]. Jan. 3.77: anti-tail 0°.03 long; comet has a "spindle-like" appearance [ZNO]. Jan. 3.94: elliptical coma with central cond.; possible tail toward p.a. ~ 270° [SCH04]. Jan. 3.99: diffuse with central cond. [COM]. Jan. 4: from Merlette (Hautes Alpes, France), w/ 20.3-cm L (62.5×), outer coma dia. 5′; 0°.4 tail at p.a. 273° curved to 283°, and 0°.08 anti-tail at p.a. 111° [GAR02]. Jan. 4.90: elliptical coma with central cond. [SCH04]. Jan. 4.91: "elliptical coma with central cond.; tail?" [COM]. Jan. 6.17: "comet displays a stellar nucleus which, at 114×, is of mag ~ 13.0 and is as hard as any star in the surrounding field; at 70×, two faint but fairly obvious tails seen — both more clearly defined on their N sides; the E-pointing one is probably a little brighter than the W one, but the latter is longer (sometimes suggested to be much longer) — and both probably widen slightly as they recede from the coma;" also tail 0°.22 long in p.a. 255° [BOR]. Jan. 11.14: elliptical coma with eccentric nucleus (coma 3′ × 4′) [COM]. Jan. 12.16: w/ 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD, coma dia. ~ 6′ × 4′; fan-like tail ~ 15′ in p.a. ~ 260°-275°; sunward tail ~ 2′.5 in p.a. ~ 120° [MIK]. Jan. 27.05: "nucleus much fainter ($m_2$ ~ 13.5-14 at 114×); at 70×, the area of greatest central cond. seems decidedly offset NNW of coma's center; extension toward p.a. 245° has sharp edge at p.a. 255° and may be a broad fan sweeping around to the S, as glimpsed with averted vision" [BOR]. Jan. 28.05: at 70×, "strange object whose outer region gives it an almost boomerang-shaped outline!; coma appears composed of a dense, circular region, offset N of center within an extremely faint, broad wedge of light — overall fainter but of the same general outline seen during Dec.; coma's N edge seems sharper than elsewhere;" also tail 0°.15 long in p.a. 240° [BOR]. Jan. 29.93: circular coma dia. 2′; 2′ anti-tail in p.a. 100°, 0°.05 main tail in p.a. 280° [BAR06]. Jan. 30.24: coma elongated (2′.5 × 5′.0) along p.a. 80°-260°; possible faint stellar cond. ($m_2$ ~ 14.0) [MOR]. Jan. 30.95: comet close to star of mag 10 [SCH04]. Jan. 30.95: comet close to star; difficult estimate [COM]. Jan. 31.07: at 114×, "tiny, faint knot of bright material has replaced the former stellar nucleus" [BOR]. Feb. 1.19: coma elongated (2′.5 × 5′.0) along p.a. 90°-270° [MOR]. Feb. 3.08: at 70×, "strong suggestion of an appendage directed toward p.a. 235° and — while its extent occasionally seems quite substantial — no reliable minimum value is recorded" [BOR]. Feb. 3.75: elliptical coma w/ minor axis 1′.5 across [BAR06]. Feb. 3.87: starlike cond. of mag 12.4 [BAR06]. Feb. 4.36: comet involved with a 9th-mag star [MOR]. Feb. 5.33: coma was nearly round and had a stellar cond. [MOR]. Feb. 7.19: central cond. was ~ 1″ in dia. with a mag of 14.0; the coma, although relatively symmetrical, was faint and poorly defined [ROQ]. Feb. 10.48: coma elongated (2′.5 × 3′.8) along p.a. 110°-280° and had a faint stellar cond. [MOR]. Feb. 19.05: at 114×, "dense central region of coma contains a tiny knot of bright material perhaps near mag 14; at 70×, Lumicon Swan-band comet filter causes no change in comet's visibility (as has been the case all along; differential extinction correction of +0.1 mag applied to this and remaining observations" [BOR]. Feb. 22.94: "possible outburst" [BAR06]. Mar. 5.18: observation hampered by a star of mag ~ 11 immediately to the S of the comet [HAL]. Mar. 21.95: comet close to star (16 UMa) [COM]. Mar. 28.07: at 91×, "comet is in central transit of a star of mag 14.5-15; Lumicon Swan-band comet filter has no affect on comet's visibility" [BOR]. Mar. 28.81: fan-like coma extending in p.a. ~ 120°-240°; conspicious tail ~ 3′ in p.a. ~ 125° [MIK].

◇ *Comet 29P/Schwassmann-Wachmann 1* ⟹ 1994 Oct. 9.46: the estimate is of a suspected candidate; examination of POSS prints, and re-observation two days later, indicates that the candidate was a tight group of three very faint stars [HAL]. Oct. 14.81: fan-shaped coma in p.a. 35°-300° [NAK01]. 1995 Jan. 29.22: observation attempt hampered by nearby bright stars and possible thin cirrus [HAL]. Feb. 1.92: w/ 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD, star-like central cond. surrounded by delicate coma (both observations) [MIK]. Feb. 19.65, 24.59, and Mar. 8.65: a region of 10″ × 10″ was measured as $m_2$ [NAK01]. Feb. 19.82: comet has delicate coma ~ 3′ across and 0′.5 star-like central cond. [MIK]. Mar. 7.97: star-like 0′.5 central cond. w/ ~ 4′ delicate coma [MIK]. Mar. 19.50: fan-shaped coma in p.a. 10°-80° [NAK01]. Mar. 28.23: comet involved with star; only suspected at $m_1$ ~ 13.0 [MOR]. Apr. 3.51: fan-shaped coma in p.a. 10°-95° [NAK01]. Apr. 3.51 and 26.50: a region of 10″ × 10″ was measured as '$m_2$' [NAK01].

◇ *Comet 65P/Gunn* ⟹ 1995 Feb. 5.93: w/ 36-cm *f*/11 T + *V* filter + 355×540 CCD, trace of a ~ 1′ tail in p.a. ~ 290° [MIK].

◇ *Comet 71P/Clark (O.S. 1994t)* ⟹ 1995 Jan. 12.21: w/ 36-cm *f*/11 T + 540×355 unfiltered CCD, 0′.5 fan-like tail in p.a. 285° [MIK].

◇ *Comet 19P/Chiron [(2060) Chiron]* ⟹ 1995 Jan. 28.02, Mar. 20.90, 24.92, 28.86, and Apr. 3.87: stellar appearance [HOR02]. Jan. 29.29: during all observations the comet appeared entirely starlike, w/ no trace of diffuseness [HAL].

◇ *Comet P/1994 A1 (Kushida; O.S. 1994a)* ⟹ 1994 Jan. 14/15: "observation interrupted by hazy clouds" [BIV].

◇ *Comet P/1994 P1 (Machholz 2; O.S. 1994o)* ⟹ 1994 Sept. 2: sky hazy but comet (component A) well seen; tail at p.a. 305°, with a 3′.5 elongated feature at p.a. 190°-200° [BIV]. Sept. 4: poor weather conditions; (component A) tail at p.a. 300°; another 3′ feature at p.a. 200° [BIV]. Oct. 2.83: TP2415 film exposed w/ 16-cm *f*/3.8 W shows 3′ coma and 8′ tail in p.a. 290° for component A; and 2′ coma for component B. [TSU02] Oct. 15.80: TP2415 film taken as on Oct. 2.83 (above) "shows another 'coma' 1′ apart in p.a. 290° from component D" [TSU02] Nov. 6.50: components A and D were both searched for; both components were assumed to be large, diffuse objects, with an appearance similar to that exhibited at the last observation in early Oct. [HAL].

◇ *Comet P/1994 X1 (McNaught-Russell; O.S. 1994u) [observations by R. H. McNaught and D. J. Asher, Siding Spring, Australia, w/ the 1.0-m reflector + CCD]* ⟹ 1995 Feb. 1.53 and 2.51: 0′.5 fan tail in p.a. 45°. Feb. 9.55: comet shows narrow tail ~ 0′.5 long in p.a. 70°, with fan extending to N.

◇ *Comet P/1995 A1 (Jedicke)* ⟹ 1995 Feb. 1.56: w/ Siding Spring 1.0-m reflector + CCD, narrow tail 0′.8 long in p.a. 260° [R. H. McNaught, D. J. Asher, and D. I. Steel].

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**Key to observers with observations published in this issue,** *with 2-digit numbers between Observer Code and Observer's Name indicating source [07 = Comet Section, British Astronomical Assn.; 11 = Dutch Comet Section; 16 = Japanese observers (c/o Akimasa Nakamura, Kima, Japan); 18 = Polish observers (c/o Arkadiusz Olech, Pruszcz, Poland); 23 = Czech group (c/o P. Pravec); 32 = Hungarian group (c/o K. Sarneczky); etc.]. Those with asterisks (*) preceding the 5-character code are new additions to the Observer Key:*

| | | |
|---|---|---|
| BAK01 | 32 | Gaspar Bakos, Budapest, Hungary |
| BAR06 | | Alexandr R. Baransky, Okhnovka, Ukraine |
| *BIV | | Nicolas Biver, France |
| BOR | | John E. Bortle, NY, U.S.A. |
| BOU | | Reinder J. Bouma, The Netherlands |
| BRO04 | 27 | Eric Broens, Belgium |
| BRU | | Ivan S. Brukhanov, Minsk, U.S.S.R. |
| CHO01 | 18 | Franciszek Chodorowski, Poland |
| COM | 11 | Georg Comello, The Netherlands |
| COO02 | | Tim P. Cooper, South Africa |
| CSU | 32 | Matyas Csukas, Salonta, Romania |
| DAM | 36 | Matteo Damiani, Italy |
| DEA | | Vicente Ferreira de Assis Neto, Brazil |
| DES01 | | Jose Guilherme de Souza Aguiar, Brazil |
| DID | | Richard Robert Didick, MA, U.S.A. |
| DIE02 | 27 | Alfons Diepvens, Belgium |
| *DIJ | | Edwin van Dijk, The Netherlands |
| DUS | 18 | Grzegorz Duszanowicz, Sweden |
| FEI | 11 | Henk Feijth, The Netherlands |
| FIL04 | 18 | Marcin Filipek, Poland |
| FOG | 36 | Sergio Foglia, Italy |
| GAM | 18 | Mariusz Gamracki, Poland |
| GAR02 | | Stephane Garro, France |
| GRA04 | 24 | Bjoern Haakon Granslo, Norway |
| HAL | | Alan Hale, U.S.A. |
| HAS02 | | Werner Hasubick, West Germany |
| HOR02 | 23 | Kamil Hornoch, Czechoslovakia |
| ITO02 | 16 | Kazuyuki Ito, Japan |
| KAM01 | | Andreas Kammerer, West Germany |
| KAM03 | 16 | Toshiyuki Kamijima, Japan |
| KOB01 | 16 | Juro Kobayashi, Japan |
| KOS | | Attila Kosa-Kiss, Salonta, Romania |
| KRY01 | | Timur Valer'evich Kryachko, Russia |
| KYS | 23 | J. Kysely, Czech Republic |
| LAN03 | 07 | James A. Lancashire, Cambridge, England |
| LEH | | Martin Lehky, Czechoslovakia |
| MEY | | Maik Meyer, Germany |
| MIK | | Herman Mikuz, Slovenia |
| MIL02 | 36 | Giannantonio Milani, Italy |
| MOD | | Robert J. Modic, OH, U.S.A. |
| MOE | | Michael Moeller, West Germany |
| MOR | | Charles S. Morris, U.S.A. |
| MOR03 | | Warren C. Morrison, Canada |
| NAG02 | 16 | Takashi Nagata, Hyogo, Japan |
| NAK01 | 16 | Akimasa Nakamura, Japan |
| *NEK | | A. Nekrasov, Belarus |
| *NEV | | V. S. Nevski, Belarus |
| NOW | | Gary T. Nowak, VT, U.S.A. |
| OHM | 16 | Fumihiko Ohmori, Japan |
| OOY | 16 | Yoshinori Ooyanagi, Japan |
| OSS | 18 | Piotr Ossowski, Poland |
| *OVE | | M. D. Overbeek, South Africa |
| PAR03 | 18 | Mieczyslaw L. Paradowski, Poland |
| PLE01 | 18 | Janusz Pleszka, Poland |
| *PLS | 23 | Martin Plsek, Czech Republic |
| POP | 23 | Martin Popek, Czech Republic |
| PRY | | Jim Pryal, WA, U.S.A. |
| ROQ | | Paul Roques, AZ, U.S.A. |
| SAR02 | 32 | Krisztian Sarneczky, Hungary |
| SCH04 | 11 | Alex H. Scholten, The Netherlands |
| SCI | 18 | Tomasz Sciezor, Poland |
| SCO01 | | James V. Scotti, AZ, U.S.A. |
| SEA | 14 | David A. J. Seargent, Australia |
| SEA01 | 14 | John Seach, Australia |
| SHA02 | 07 | Jonathan D. Shanklin, England |
| SHA04 | | Gregory T. Shanos, U.S.A. |
| SHU | | Sergey Shurpakov, U.S.S.R. |
| SIW | 18 | Ryszard Siwiec, Poland |
| SPE01 | 18 | Jerzy Speil, Poland |
| SPR | | Christopher E. Spratt, BC, Canada |
| SZE02 | 32 | Laszlo Szentasko, Hungary |
| TOM01 | | Maura Tombelli, Italy |
| TSU02 | 16 | Mitsunori Tsumura, Japan |
| *VEL03 | | Peter Velestschuk, Ukraine |
| VIC | 32 | Zoltan Vician, Hehalom, Hungary |
| VIE | | Jean-Francois Viens, Quebec, Canada |
| YAS | 16 | Masanori Yasuki, Japan |
| YOS | 16 | Shigeru Yoshida, Japan |
| ZNO | 23 | Vladimir Znojil, Czech Republic |

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## TABULATED DATA

The headings for the tabulated data are as follows: "DATE (UT)" = Date and time to hundredths of a day in Universal Time; "N" = notes [* = correction to observation published in earlier issue of the *ICQ*; an exclamation mark (!) in this same location indicates that the observer has corrected his estimate in some manner for atmospheric extinction (prior to September 1992, this was the standard symbol for noting extinction correction, but following publication of the extinction paper — July 1992 *ICQ* — this symbol is only to be used to denote corrections made using procedures different from that outlined by Green 1992, *ICQ* **14**, 55-59 — and then only for situations where the observed comet is at altitude > 10°); '&' = comet observed at altitude 20° or less with no atmospheric extinction correction applied; '$' = comet observed at altitude 10° or lower, observations corrected by the observer using procedure of Green (*ibid.*); for a correction applied by the observer using Tables Ia, Ib, or Ic of Green (*ibid.*), the letters 'a', 'w', or 's', respectively, should be used].

"MM" = the method employed for estimating the total visual magnitude [B = Bobrovnikoff, M = Morris, S = Sidgwick, C = unfiltered CCD integration, c = same as 'C', but for nuclear magnitudes, V = electronic observations — usually CCD — with Johnson *V* filter, *etc.* — see October 1980 issue of *ICQ*, pages 69-73]. "MAG." = total visual magnitude estimate; a colon indicates that the observation is only approximate, due to bad weather conditions, *etc.*; a left bracket ([) indicates that the comet was not seen, with an estimated limiting magnitude given (if the comet IS seen, and it is simply estimated to be fainter than a certain magnitude, a "greater-than" sign (>) must be used, not a bracket). "RF" = reference for total magnitude estimates (see pages 98-100 of the October 1992 issue, and page 60 of the April 1993 issue, for all of the 1- and 2-letter codes). "AP." = aperture in centimeters of the instrument used for the observations, usually given to tenths.

"T" = type of instrument used for the observation (R = refractor, L = Newtonian reflector, B = binoculars, C = Cassegrain reflector, A = camera, T = Schmidt-Cassegrain reflector, S = Schmidt-Newtonian reflector, E = naked eye, *etc.*). "F/" and "PWR" are the focal ratio and power or magnification, respectively, of the instrument used for the observation — given to nearest whole integer (round even).

"COMA" = estimated coma diameter in minutes of arc; an ampersand (&) indicates an approximate estimate; an exclamation mark (!) precedes a coma diameter when the comet was not seen (*i.e.*, was too faint) and where a limiting magnitude estimate is provided based on an "assumed" coma diameter (a default size of 1′ or 30″ is recommended; cf. *ICQ* **9**, 100); a plus mark (+) precedes a coma diameter when a diaphragm was used electronically, thereby specifying the diaphragm size (i.e., the coma is almost always larger than such a specified diaphragm size). "DC" = degree of condensation on a scale where 9 = stellar and 0 = diffuse; a slash (/) indicates a value midway between the given number and the next-higher integer. "TAIL" = estimated tail length in degrees, to 0.01 degree if appropriate; again, an ampersand indicates a rough estimate. "PA" = estimated measured position angle of the tail to nearest whole integer in degrees (north = 0°, east = 90°). "OBS" = the observer who made the observation (given as a 3-letter, 2-digit code).

A complete list of the Keys to abbrevations used in the *ICQ* is available from the Editor for $4.00 postpaid (available free of charge via e-mail). ***Please note that data in archival form, and thus the data to be sent in machine-readable form, use a format that is different from that of the Tabulated data in the printed pages of the ICQ;*** see pages 59-61 of the July 1992 issue (and p. 10 of this issue) for further information [note correction on page 140 of the October 1993 issue]. Further guidelines concerning reporting of data may be found on pages 59-60 of the April 1993 issue.

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**Comet C/1992 J1 (Spacewatch) [= 1992h, old-style designation]**

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 08 15.74 | | C | 17.3 | GA | 60.0 | Y | 6 | | 0.3 | | | 33 | NAK01 |
| 1994 09 08.74 | | C | 17.0 | GA | 60.0 | Y | 6 | | 0.35 | | | 20 | NAK01 |
| 1994 09 13.72 | | C | 17.5: | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |
| 1994 10 01.64 | | C | 17.0: | HS | 20.0 | L | 6 | | 0.3 | | | | IT002 |
| 1994 10 14.72 | | C | 17.2 | GA | 60.0 | Y | 6 | | 0.35 | | | | NAK01 |
| 1994 10 30.51 | | C | 17.2 | GA | 60.0 | Y | 6 | | 0.35 | | 1.0m | 25 | NAK01 |
| 1994 11 23.50 | | C | 17.5 | GA | 60.0 | Y | 6 | | 0.45 | | 0.8m | 33 | NAK01 |
| 1994 12 04.49 | | C | 17.4 | HS | 20.0 | L | 6 | | 0.5 | | | | IT002 |
| 1994 12 29.46 | | C | 18.5: | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |

**Comet C/1993 A1 (Mueller) [= 1993a]**

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 09 05.16 | | B | 10.9 | HS | 20.3 | L | 6 | 79 | & 1.5 | 6 | | | BIV |
| 1993 10 09.85 | | B | 10.4 | HS | 20.3 | L | 6 | 40 | 5.0 | 7 | &0.1 | 340 | BIV |
| 1993 10 24.78 | | B | 10.0: | HS | 20.3 | L | 6 | 40 | 5.0 | 7 | &0.1 | 40 | BIV |
| 1993 10 25.18 | | B | 9.7 | HS | 20.3 | L | 6 | 79 | 5.0 | 7 | &0.1 | 80 | BIV |
| 1993 11 12.81 | | B | 9.2: | S | 9.6 | R | 6 | 15 | | 5 | | | BIV |
| 1994 01 14.84 | | B | 10.5 | HS | 20.3 | L | 6 | 40 | 2 | 5 | | | BIV |
| 1994 01 16.83 | | B | 10.8 | HS | 20.3 | L | 6 | 79 | 1.5 | 3 | | | BIV |
| 1994 07 07.09 | | S | 10.8 | AC | 31 | L | | 61 | 2.2 | 3 | | | DEA |

**Comet C/1993 Q1 (Mueller) [= 1993p]**

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 10 10.02 | | B | 12.8 | HS | 20.3 | L | 6 | 159 | 0.8 | 5 | | | BIV |
| 1993 10 25.07 | | B | 12.5 | HS | 20.3 | L | 6 | 159 | 1.0 | 5 | | | BIV |
| 1994 01 14.77 | | B | 10.4 | HS | 20.3 | L | 6 | 79 | 3.0 | 7 | &0.1 | 70 | BIV |

**Comet C/1993 Y1 (McNaught-Russell) [= 1993v]**

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 03 21.03 | | S | 8.2 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 03 26.83 | | B | 7.2: | S | 9.6 | R | 6 | 15 | | 3 | | | BIV |
| 1994 03 30.88 | | B | 7.2: | S | 9.6 | R | 6 | 15 | | | | | BIV |
| 1994 03 31.05 | | S | 7.4 | AC | 3.5 | B | | 7 | 5 | | | | MOR03 |
| 1994 04 01.05 | | S | 7.6 | AC | 3.5 | B | | 7 | 8 | 3 | | | MOR03 |
| 1994 04 02.90 | | B | 7.1 | S | 3.0 | R | 7 | 6 | &20 | 4 | | | BIV |
| 1994 04 04.06 | | S | 7.2 | AC | 3.5 | B | | 7 | 7 | 3 | | | MOR03 |
| 1994 04 04.90 | | B | 7.5 | S | 4.0 | B | | 10 | | | | | BIV |
| 1994 04 08.06 | | S | 7.0 | AC | 3.5 | B | | 7 | 9 | 3 | | | MOR03 |
| 1994 04 14.89 | | B | 8.1: | S | 3.0 | R | 7 | 6 | | | | | BIV |
| 1994 04 14.89 | | B | 9.0 | S | 20.3 | L | 6 | 40 | 6 | 3 | | | BIV |
| 1994 04 15.07 | | S | 7.6 | AC | 3.5 | B | | 7 | 6.5 | | | | MOR03 |

Comet C/1993 Y1 (McNaught-Russell) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 04 21.92 | | B | 8.8: | S | 20.3 | L | 6 | 40 | 5 | 3 | | | BIV |
| 1994 04 22.07 | | S | 8.5 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MOR03 |
| 1994 04 22.16 | | B | 8.4: | S | 20.3 | L | 6 | 79 | 4 | 2 | | | BIV |
| 1994 04 23.07 | | S | 8.6 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MOR03 |
| 1994 04 23.86 | | B | 9.2: | S | 20.3 | L | 6 | 40 | 4.5 | 2 | | | BIV |
| 1994 04 30.15 | | S | 9.4 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MOR03 |
| 1994 05 03.11 | | S | 9.0 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MOR03 |
| 1994 05 04.09 | | S | 9.1 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MOR03 |
| 1994 05 06.51 | | M | 9.5 | AC | 20 | L | 6 | 38 | 3 | 4 | | | KAM03 |
| 1994 05 07.12 | | S | 9.3 | AC | 15 | R | 5 | 42 | 4.5 | 2 | | | MOR03 |
| 1994 05 09.10 | | S | 9.6 | AC | 15 | R | 5 | 42 | 4 | 2 | | | MOR03 |
| 1994 05 09.51 | | S | 9.1 | AC | 20 | L | 6 | 38 | 4.5 | 3 | | | KAM03 |
| 1994 05 11.95 | | S | 8.8 | NP | 25.4 | J | 6 | 47 | 4 | 3/ | | | BOU |
| 1994 05 12.90 | | B | 10.4 | HS | 20.3 | L | 6 | 40 | 4 | 2 | | | BIV |
| 1994 05 12.93 | | S | 8.8 | NP | 25.4 | J | 6 | 47 | 4.5 | 3 | | | BOU |
| 1994 05 13.12 | | S | 9.8 | AC | 15 | R | 5 | 42 | 4 | 2 | | | MOR03 |
| 1994 05 13.93 | | S | 9.0 | NP | 25.4 | J | 6 | 47 | 4.5 | 2/ | | | BOU |
| 1994 05 14.10 | | S | 10.0 | AC | 15 | R | 5 | 42 | 3.5 | 2 | | | MOR03 |
| 1994 05 14.96 | | B | 10.5 | HS | 20.3 | L | 6 | 40 | 4 | 2 | | | BIV |
| 1994 05 15.95 | | B | 10.0 | HS | 20.3 | L | 6 | 40 | 4.5 | 2 | | | BIV |
| 1994 05 20.33 | | S | 10.5 | AC | 15 | R | 5 | 42 | 3.5 | 1 | | | MOR03 |
| 1994 05 27.98 | | S | 10.5: | NP | 25.4 | J | 6 | 58 | | 0 | | | BOU |
| 1994 05 29.96 | | S | 11.0 | NP | 25.4 | J | 6 | 58 | 3 | 0/ | | | BOU |
| 1994 05 30.98 | | S | 11.2 | NP | 25.4 | J | 6 | 58 | 3 | 0 | | | BOU |
| 1994 05 31.97 | | S | 11.1 | NP | 25.4 | J | 6 | 58 | 3.5 | 0/ | | | BOU |
| 1994 06 03.99 | | S | 11.3 | NP | 25.4 | J | 6 | 58 | 3 | 0 | | | BOU |
| 1994 06 05.99 | | S | 11.6 | NP | 25.4 | J | 6 | 58 | 2.5 | 0 | | | BOU |
| 1994 06 09.20 | | S | 12.3 | AC | 44.5 | L | 4 | 80 | 2.0 | 1 | | | MOR03 |
| 1994 06 15.00 | | S | 12.2 | NP | 25.4 | J | 6 | 72 | 2 | 0 | | | BOU |
| 1994 06 17.00 | | S | 12.0 | NP | 25.4 | J | 6 | 72 | 2.0 | 0 | | | BOU |
| 1994 09 25.44 | | C | 18.4 | GA | 60.0 | Y | 6 | | 0.35 | | | | NAK01 |
| 1994 10 02.45 | | C | 18.7 | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |

Comet C/1994 E2 (Shoemaker-Levy) [= 1994d]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 08 05.76 | | C | 18.2 | GA | 60.0 | Y | 6 | | 0.2 | | | | NAK01 |
| 1994 08 17.77 | | C | 18.2 | GA | 60.0 | Y | 6 | | 0.2 | | | | NAK01 |
| 1994 09 08.75 | | C | 18.2 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |
| 1994 09 13.70 | | C | 18.5 | GA | 60.0 | Y | 6 | | 0.2 | | | | NAK01 |

Comet C/1994 G1 (Takamizawa-Levy) [= 1994f]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 04 20.09 | | S | 10.6 | GA | 25.4 | J | 6 | 58 | 2.5 | 1/ | | | BOU |
| 1994 04 30.34 | | S | 9.3 | AC | 15 | R | 5 | 42 | 4.5 | 2 | | | MOR03 |
| 1994 05 03.01 | | S | 9.6 | AC | 25.4 | J | 6 | 58 | 3.1 | 1/ | | | BOU |
| 1994 05 03.36 | | S | 9.8 | AC | 15 | R | 5 | 42 | 3 | 2 | | | MOR03 |
| 1994 05 08.00 | | M | 9.0 | AC | 25.4 | J | 6 | 58 | 3 | 5 | | | BOU |
| 1994 05 08.01 | | S | 8.9 | AC | 8.0 | B | | 15 | | 3 | | | BOU |
| 1994 05 09.31 | | S | 9.5 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MOR03 |
| 1994 05 11.29 | | S | 9.3 | AC | 15 | R | 5 | 42 | 4.5 | 3 | | | MOR03 |
| 1994 05 11.96 | | M | 9.0 | AC | 25.4 | J | 6 | 58 | 3 | 5 | | | BOU |
| 1994 05 11.98 | | S | 8.8 | AC | 8.0 | B | | 15 | | 3 | | | BOU |
| 1994 05 12.95 | | S | 8.7 | AC | 8.0 | B | | 15 | 4 | 2 | | | BOU |
| 1994 05 13.10 | | B | 9.7 | HS | 20.3 | L | 6 | 40 | 4 | 6 | | | BIV |
| 1994 05 13.32 | | S | 9.4 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 05 13.98 | | S | 8.5 | AC | 8.0 | B | | 15 | 5 | 2/ | | | BOU |
| 1994 05 15.08 | | B | 9.5 | HS | 20.3 | L | 6 | 40 | 3.5 | 5 | | | BIV |
| 1994 05 15.97 | | S | 8.5 | AC | 8.0 | B | | 15 | 5 | 2 | | | BOU |
| 1994 05 16.07 | | B | 9.6 | HS | 20.3 | L | 6 | 40 | 4.5 | 5 | | | BIV |
| 1994 05 19.93 | | S | 9.1 | S | 6.0 | B | | 20 | & 6 | 4 | | | SCI |
| 1994 05 20.33 | | S | 9.0 | AC | 15 | R | 5 | 42 | 4 | | | | MOR03 |
| 1994 05 27.94 | | M | 8.3 | AC | 25.4 | J | 6 | 47 | 4 | 5 | | | BOU |

Comet C/1994 G1 (Takamizawa-Levy) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 05 28.90 | | S | 9.0 | S | 6.7 | B | | 20 | & 5 | 4 | | | SCI |
| 1994 05 29.90 | | S | 9.0 | S | 6.7 | B | | 20 | & 4 | 3/ | | | SCI |
| 1994 05 29.97 | | M | 8.3 | AC | 25.4 | J | 6 | 47 | 4 | 5 | | | BOU |
| 1994 05 29.98 | | S | 8.2 | AC | 8.0 | B | | 15 | 6 | 2/ | | | BOU |
| 1994 05 30.92 | | S | 9.0 | S | 6.7 | B | | 20 | & 5 | 3/ | | | SCI |
| 1994 05 30.94 | | S | 8.2 | AC | 8.0 | B | | 15 | 6 | 3 | | | BOU |
| 1994 05 31.14 | | S | 9.1 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MORO3 |
| 1994 05 31.98 | | S | 8.3 | AC | 8.0 | B | | 15 | 5.5 | 2/ | | | BOU |
| 1994 06 01.14 | | S | 9.1 | AC | 15 | R | 5 | 42 | 5.5 | 3 | | | MORO3 |
| 1994 06 01.88 | | S | 9.1 | S | 6.7 | B | | 20 | & 6 | 4 | | | SCI |
| 1994 06 03.89 | | S | 9.6: | S | 6.7 | B | | 20 | & 6 | 4 | | | SCI |
| 1994 06 03.98 | | S | 8.1 | AC | 8.0 | B | | 15 | 6 | 3/ | | | BOU |
| 1994 06 04.12 | | S | 9.1 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MORO3 |
| 1994 06 05.17 | | S | 9.2 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MORO3 |
| 1994 06 05.97 | | S | 8.3 | AC | 8.0 | B | | 15 | 5 | 3 | | | BOU |
| 1994 06 06.90 | | S | 10.1: | S | 6.7 | B | | 20 | & 6 | 4 | | | SCI |
| 1994 06 09.17 | | S | 9.3 | AC | 15 | R | 5 | 42 | 4.5 | 3 | | | MORO3 |
| 1994 06 11.99 | | M | 8.7 | NP | 25.4 | J | 6 | 47 | 4 | 5 | | | BOU |
| 1994 06 13.21 | | S | 9.4 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MORO3 |
| 1994 06 13.98 | | S | 8.8 | AC | 25.4 | J | 6 | 47 | 3.5 | 4 | | | BOU |
| 1994 06 14.99 | | S | 8.7 | AC | 25.4 | J | 6 | 47 | 3.5 | 4 | | | BOU |
| 1994 06 16.98 | | S | 8.9 | AC | 25.4 | J | 6 | 58 | 4 | 4 | | | BOU |
| 1994 06 18.25 | | S | 9.7 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MORO3 |
| 1994 06 22.97 | | S | 9.6 | AC | 25.4 | J | 6 | 58 | 3 | 2 | | | BOU |
| 1994 06 29.96 | | S | 9.8 | AC | 25.4 | J | 6 | 58 | 2.5 | 1/ | | | BOU |
| 1994 07 01.95 | | S | 10.1 | GA | 25.4 | J | 6 | 58 | 2.5 | 2 | | | BOU |
| 1994 07 05.96 | | S | 10.2 | GA | 25.4 | J | 6 | 58 | 2.5 | 1/ | | | BOU |
| 1994 07 06.99 | | B | 11.4 | HS | 20.3 | L | 6 | 79 | 2 | 5 | | | BIV |
| 1994 07 09.99 | | S | 10.0 | AC | 25.4 | J | 6 | 58 | 3.2 | 1/ | | | BOU |
| 1994 07 11.12 | | S | 10.4 | AC | 15 | R | 5 | 42 | 4.5 | 2 | | | MORO3 |
| 1994 07 11.96 | | S | 10.2 | AC | 25.4 | J | 6 | 58 | 3.2 | 1 | | | BOU |
| 1994 07 12.12 | | S | 10.4 | AC | 15 | R | 5 | 42 | 3.5 | | | | MORO3 |
| 1994 07 12.96 | | S | 10.3 | AC | 25.4 | J | 6 | 58 | 2.8 | 1 | | | BOU |
| 1994 07 14.12 | | S | 10.8 | AC | 15 | R | 5 | 42 | 3 | | | | MORO3 |
| 1994 07 31.93 | | B | 12.4 | HS | 20.3 | L | 6 | 79 | 0.8 | 5 | | | BIV |
| 1994 12 23.73 | | C | 15.1 | HS | 41.0 | L | 6 | | 0.49 | | | | KOBO1 |
| 1995 01 01.82 | | C | 14.7 | HS | 41.0 | L | 6 | | 1.0 | | | | KOBO1 |
| 1995 01 02.72 | | C | 14.9 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 01 06.77 | | C | 15.3 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 09.81 | | C | 15.3 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 12.71 | | C | 15.0 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 01 15.73 | | C | 15.5 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 01 17.68 | | C | 15.0 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 26.74 | | C | 15.4 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 26.79 | | C | 14.6 | GA | 60.0 | Y | 6 | | 1.2 | | > 5.6m | 68 | NAKO1 |
| 1995 01 27.64 | | C | 15.2 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 29.62 | | C | 15.3 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 01 30.65 | | C | 15.5 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 01 31.98 | ! | V | 14.6 | YF | 20.0 | T | 2 | | 0.3 | 9 | & 5 m | 80 | MIK |
| 1995 02 03.62 | | C | 15.1 | HS | 25.4 | T | 6 | | 0.7 | | | | YOS |
| 1995 02 03.65 | | C | 15.3 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 06.67 | | C | 15.6 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 07.65 | | C | 15.9 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 17.64 | | C | 16.0 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 19.60 | | C | 16.2 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 19.64 | | C | 15.4 | GA | 60.0 | Y | 6 | | 1.05 | | 3.4m | 67 | NAKO1 |
| 1995 02 21.63 | | C | 15.6 | GA | 60.0 | Y | 6 | | 1.15 | | 3.4m | 72 | NAKO1 |
| 1995 02 22.65 | | C | 15.9 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 03 20.47 | | C | 17.0 | GA | 60.0 | Y | 6 | | 0.6 | | 1.3m | 78 | NAKO1 |
| 1995 03 31.47 | | C | 17.5 | GA | 60.0 | Y | 6 | | 0.45 | | | 65 | NAKO1 |
| 1995 04 03.55 | | C | 17.6 | GA | 60.0 | Y | 6 | | 0.45 | | | | NAKO1 |
| 1995 04 26.46 | | C | 18.3 | GA | 60.0 | Y | 6 | | 0.3 | | | | NAKO1 |

Comet C/1994 G1-A (Takamizawa-Levy) [component A]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 04 05.13 | | c | 20.7 | FA | 91.4 | L | 5 | | | | | | SC001 |
| 1995 04 05.15 | | C | 19.5 | FA | 91.4 | L | 5 | | 0.20 | | & 1.0m | 78 | SC001 |

Comet C/1994 G1-B (Takamizawa-Levy) [component B]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 04 05.13 | | c | 22.7 | FA | 91.4 | L | 5 | | | | | | SC001 |

Comet C/1994 J2 (Takamizawa) [= 1994i]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 05 11.97 | | S | 10.2 | GA | 25.4 | J | 6 | 58 | 3.0 | 3 | | | BOU |
| 1994 05 12.96 | | S | 10.2 | GA | 25.4 | J | 6 | 58 | 2.5 | 3 | | | BOU |
| 1994 05 13.06 | | B | 10.9 | HS | 20.3 | L | 6 | 40 | 3 | 7 | | | BIV |
| 1994 05 13.97 | | S | 10.3 | GA | 25.4 | J | 6 | 58 | 3.0 | 2/ | | | BOU |
| 1994 05 15.02 | | B | 10.5 | HS | 20.3 | L | 6 | 40 | 2 | 5 | | | BIV |
| 1994 05 16.02 | | B | 10.6 | HS | 20.3 | L | 6 | 40 | 2.5 | 4 | | | BIV |
| 1994 05 27.96 | | S | 9.9 | GA | 25.4 | J | 6 | 58 | 2 | 2 | | | BOU |
| 1994 05 29.95 | | S | 9.8 | GA | 25.4 | J | 6 | 58 | 2.4 | 4 | | | BOU |
| 1994 05 30.96 | | S | 10.0 | GA | 25.4 | J | 6 | 58 | 2.4 | 4 | | | BOU |
| 1994 05 31.12 | | S | 11.0 | AC | 15 | R | 5 | 62 | 1.7 | 2 | | | MOR03 |
| 1994 05 31.95 | | S | 10.0 | GA | 25.4 | J | 6 | 72 | 2.3 | 4/ | | | BOU |
| 1994 06 01.13 | | S | 10.9 | AC | 44.5 | L | 4 | 80 | 2.2 | 4 | | | MOR03 |
| 1994 06 04.13 | | S | 10.6 | AC | 15 | R | 5 | 42 | 3 | 3 | | | MOR03 |
| 1994 06 05.18 | | S | 10.6 | AC | 15 | R | 5 | 62 | 2.3 | 3 | | | MOR03 |
| 1994 06 09.19 | | S | 11.1 | AC | 44.5 | L | 4 | 80 | 1.6 | 3 | | | MOR03 |
| 1994 06 10.17 | | S | 11.0 | AC | 15 | R | 5 | 42 | 3 | 2 | | | MOR03 |
| 1994 07 07.05 | | S | 10.4 | AC | 31 | L | | 61 | 2.4 | 4 | | | DEA |
| 1995 01 01.79 | | C | 13.2 | HS | 41.0 | L | 6 | | 1.0 | | | | KOB01 |
| 1995 02 21.59 | a | C | 12.4 | GA | 60.0 | Y | 6 | | 2.3 | | | 110 | NAK01 |
| 1995 02 24.51 | a | C | 12.6 | GA | 60.0 | Y | 6 | | 2.2 | | | 112 | NAK01 |
| 1995 03 19.47 | a | C | 13.0 | GA | 60.0 | Y | 6 | | 1.8 | | 4.8m | 122 | NAK01 |
| 1995 03 31.46 | a | C | 13.8 | GA | 60.0 | Y | 6 | | 1.25 | | | 115 | NAK01 |
| 1995 04 23.46 | a | C | 13.8 | GA | 60.0 | Y | 6 | | 1.2 | | | | NAK01 |

Comet C/1994 N1 (Nakamura-Nishimura-Machholz) [= 1994m]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 07 09.97 | | S | 9.5 | AC | 25.4 | J | 6 | 58 | 2.7 | 3 | | | BOU |
| 1994 07 10.97 | | S | 9.5 | AC | 25.4 | J | 6 | 58 | 3.2 | 2/ | | | BOU |
| 1994 07 11.98 | | S | 9.3 | AC | 25.4 | J | 6 | 58 | 3.5 | 3 | | | BOU |
| 1994 07 12.97 | | S | 9.2 | AC | 25.4 | J | 6 | 47 | 3.8 | 3/ | | | BOU |
| 1994 07 16.97 | | S | 9.1 | AC | 25.4 | J | 6 | 47 | 3.8 | 3 | | | BOU |
| 1994 07 17.99 | | S | 9.0 | AC | 25.4 | J | 6 | 47 | 3.8 | 3/ | | | BOU |
| 1994 07 19.00 | | S | 9.1 | AC | 15.6 | L | 5 | 29 | 4.0 | 3/ | | | BOU |
| 1994 07 27.10 | s | S | 9.4 | AC | 15 | R | 5 | 42 | 4.5 | 2 | | | MOR03 |
| 1994 07 28.88 | | B | 9.2 | S | 35 | M | 10 | 90 | &11 | 3 | | | PLE01 |
| 1994 07 28.93 | | B | 10.3 | HS | 20.3 | L | 6 | 79 | 3.5 | 5 | | | BIV |
| 1994 07 29.91 | | S | 8.6 | AC | 25.4 | J | 6 | 47 | 4.5 | 3 | | | BOU |
| 1994 07 29.92 | | B | 9.1 | S | 10.0 | B | | 25 | &15 | 3 | | | PLE01 |
| 1994 07 30.94 | | B | 9.9 | HS | 20.3 | L | 6 | 40 | 4.0 | 4 | | | BIV |
| 1994 07 30.97 | | B | 8.9 | S | 10.0 | B | | 25 | &14 | 2/ | | | PLE01 |
| 1994 07 31.88 | | B | 8.6 | S | 10.0 | B | | 25 | &14 | 2 | | | PLE01 |
| 1994 07 31.91 | | S | 8.6 | AC | 25.4 | J | 6 | 47 | 4.5 | 3 | | | BOU |
| 1994 07 31.95 | | B | 9.5 | HS | 20.3 | L | 6 | 40 | 4.5 | 3 | | | BIV |
| 1994 08 01.94 | | B | 9.4 | HS | 20.3 | L | 6 | 40 | 4.5 | 3 | | | BIV |
| 1994 08 01.96 | | B | 8.3 | S | 10.0 | B | | 25 | &12 | 2/ | &0.3 | 317 | PLE01 |
| 1994 08 02.88 | | S | 8.6 | S | 10.0 | B | | 25 | &12 | 3 | | | PLE01 |
| 1994 08 02.97 | | S | 8.5 | AC | 25.4 | J | 6 | 47 | 4.5 | 4 | | | BOU |
| 1994 08 03.03 | | S | 8.4 | AC | 25.4 | J | 6 | 61 | 3 | 4 | | | FEI |
| 1994 08 03.10 | | B | 9.7 | HS | 20.3 | L | 6 | 40 | 4.0 | 4 | | | BIV |
| 1994 08 03.94 | | S | 8.6 | AC | 8.0 | B | | 15 | 6 | 2 | | | BOU |
| 1994 08 03.95 | | S | 8.5 | AC | 25.4 | J | 6 | 47 | 4.5 | 4 | | | BOU |
| 1994 08 04.04 | | S | 8.5 | AC | 25.4 | J | 6 | 61 | 2.5 | 5 | | | FEI |
| 1994 08 04.94 | | S | 8.5 | AC | 25.4 | J | 6 | 47 | 5.5 | 3 | | | BOU |

Comet C/1994 N1 (Nakamura-Nishimura-Machholz) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 08 04.97 | | S | 8.8 | S | 10.0 | B | | 25 | &10 | 3/ | &0.2 | 325 | PLE01 |
| 1994 08 05.93 | | S | 9.2 | S | 10.0 | B | | 25 | &11 | 3 | | | PLE01 |
| 1994 08 06.90 | | S | 8.9 | S | 10.0 | B | | 25 | & 8 | 2/ | | | PLE01 |
| 1994 08 06.92 | | S | 8.4 | AC | 25.4 | J | 6 | 47 | 6 | 3 | | | BOU |
| 1994 08 07.34 | | S | 9.4 | AC | 15 | R | 5 | 42 | 4 | 2 | | | MOR03 |
| 1994 08 07.93 | | S | 8.4 | AC | 8.0 | B | | 15 | 6.5 | 2 | | | BOU |
| 1994 08 08.04 | | S | 8.4 | AC | 25.4 | J | 6 | 61 | 2.5 | 4 | | | FEI |
| 1994 08 08.12 | | S | 9.5 | AC | 15 | R | 5 | 42 | 5 | 2 | | | MOR03 |
| 1994 08 08.26 | | S | 10.1 | AC | 11.4 | L | 8 | 40 | 2 | 3 | | | VIE |
| 1994 08 08.93 | | S | 8.3 | AC | 25.4 | J | 6 | 47 | 6 | 3 | | | BOU |
| 1994 08 08.93 | | S | 9.1 | S | 10.0 | B | | 25 | & 6 | 3 | | | PLE01 |
| 1994 08 09.96 | | S | 8.2 | AA | 25.4 | J | 6 | 47 | 6 | 3 | | | BOU |
| 1994 08 09.97 | | S | 9.3 | S | 10.0 | B | | 25 | & 5 | 3 | | | PLE01 |
| 1994 08 10.35 | | S | 9.5 | AC | 15 | R | 5 | 42 | 4.5 | 2 | | | MOR03 |
| 1994 08 10.97 | | S | 9.8: | S | 10.0 | B | | 25 | & 5 | 2/ | | | PLE01 |
| 1994 08 11.97 | | S | 10.3: | S | 10.0 | B | | 25 | & 5 | 2/ | | | PLE01 |
| 1994 08 12.27 | | S | 8.7 | S | 20 | T | 10 | 63 | 2.7 | 2 | | | PRY |
| 1994 08 12.59 | | M | 8.6 | AC | 10 | L | 6 | 40 | 4 | 3 | | | KAM03 |
| 1994 08 13.05 | | S | 8.3 | AC | 25.4 | J | 6 | 61 | 2.5 | 4 | | | FEI |
| 1994 08 14.94 | | S | 8.1 | AC | 25.4 | J | 6 | 47 | 7.5 | 3 | | | BOU |
| 1994 08 15.07 | | S | 9.4 | AC | 15 | R | 5 | 42 | 4 | 1 | | | MOR03 |
| 1994 08 15.71 | | S | 8.4 | AC | 20 | L | 6 | 48 | 4.5 | 4 | | | YAS |
| 1994 08 15.97 | | S | 8.2 | AC | 25.4 | J | 6 | 47 | 7.5 | 2/ | | | BOU |
| 1994 08 17.02 | | S | 8.1 | AC | 25.4 | J | 6 | 47 | 7.5 | 2/ | | | BOU |
| 1994 08 17.25 | | S | 9.6 | AC | 11.4 | L | 8 | 40 | 5 | 3 | | | VIE |
| 1994 08 27.85 | | S | 8.8 | AC | 25.4 | J | 6 | 47 | | 2 | | | BOU |
| 1994 08 28.06 | | S | 7.8 | AA | 8.0 | B | | 11 | 6 | 4/ | | | DES01 |
| 1994 08 28.86 | | S | 8.5 | AC | 25.4 | J | 6 | 47 | 5 | 2 | | | BOU |
| 1994 08 29.04 | | S | 7.7 | AA | 8.0 | B | | 11 | 8 | 4 | | | DES01 |
| 1994 08 29.07 | | S | 8.5 | AC | 15 | R | 5 | 42 | 7 | 2 | | | MOR03 |
| 1994 08 29.86 | | S | 8.4 | AC | 25.4 | J | 6 | 47 | 6 | 2 | | | BOU |
| 1994 08 30.06 | | S | 7.7 | AA | 8.0 | B | | 11 | 7 | 4 | | | DES01 |
| 1994 08 30.92 | | S | 9.0 | AA | 11 | L | 7 | 32 | 7 | 2 | | | VEL03 |
| 1994 08 31.08 | | S | 7.7 | AA | 8.0 | B | | 11 | 8 | 4 | | | DES01 |
| 1994 09 01.12 | | S | 7.8 | AA | 8.0 | B | | 11 | 6 | 4 | | | DES01 |
| 1994 09 02.00 | | B | 9.3 | HS | 20.3 | L | 6 | 40 | 6.5 | 3 | | | BIV |
| 1994 09 02.14 | | S | 9.2 | AC | 15 | R | 5 | 42 | 6 | 3 | | | MOR03 |
| 1994 09 02.93 | | B | 9.3 | HS | 20.3 | L | 6 | 40 | 5.5 | 3 | | | BIV |
| 1994 09 02.93 | | S | 8.7: | AA | 11 | L | 7 | 32 | 6 | 3 | | | VEL03 |
| 1994 09 03.08 | | S | 7.8 | AA | 8.0 | B | | 11 | 8 | 4 | | | DES01 |
| 1994 09 03.63 | | S | 7.6 | AA | 10.0 | B | | 20 | 10 | 3 | | | YAS |
| 1994 09 04.06 | | S | 7.6 | AA | 8.0 | B | | 11 | 10 | 4 | | | DES01 |
| 1994 09 04.07 | | B | 9.5 | HS | 20.3 | L | 6 | 40 | 7.0 | 3 | | | BIV |
| 1994 09 05.04 | | S | 7.6 | AA | 8.0 | B | | 11 | 12 | 4 | | | DES01 |
| 1994 09 06.08 | | S | 9.8 | AC | 15 | R | 5 | 42 | 6 | 2 | | | MOR03 |
| 1994 09 06.90 | | S | 10.0 | AA | 11 | L | 7 | 32 | 2.7 | 2 | | | VEL03 |
| 1994 09 06.99 | | S | 7.7 | AA | 8.0 | B | | 11 | 12 | 3/ | ? | | DES01 |
| 1994 09 07.97 | | S | 8.0 | AA | 8.0 | B | | 11 | 10 | 5 | | | DES01 |
| 1994 09 08.95 | | S | 8.1 | AA | 8.0 | B | | 11 | 8 | 5 | | | DES01 |
| 1994 09 09.14 | | S | 9.7 | AC | 15 | R | 5 | 42 | 4.5 | 1 | | | MOR03 |
| 1994 09 10.10 | | S | 9.9 | AC | 15 | R | 5 | 42 | 5 | 0 | | | MOR03 |
| 1994 09 11.88 | | S | 9.3 | AC | 25.4 | J | 6 | 47 | 5.5 | 0 | | | BOU |
| 1994 09 12.14 | | S | 10.5 | AC | 15 | R | 5 | 42 | 4 | 0 | | | MOR03 |
| 1994 09 13.15 | | Y | 10.7 | SC | 25 | T | 4 | | & 1 | 2 | | | ROQ |

Comet C/1994 T1 (Machholz) [= 1994r]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 12.37 | | S | 11.3 | AC | 31.7 | L | 6 | 68 | 2.3 | 3 | | | BOR |
| 1994 10 12.99 | | S | 11.0 | AC | 25.4 | J | 6 | 58 | 2 | 2 | | | BOU |
| 1994 10 13.37 | | S | 11.0 | AC | 31.7 | L | 6 | 68 | 2.6 | 2 | | | BOR |
| 1994 10 13.75 | | S | 11.2 | HS | 41.0 | L | 5 | 73 | 3 | 3 | | | KOB01 |
| 1994 10 14.76 | | C | 12.9 | HS | 20.0 | L | 6 | | 2.4 | | | | ITO02 |
| 1994 10 14.78 | | C | 12.3 | GA | 60.0 | Y | 6 | | 3.6 | | | 10 | NAK01 |

Comet C/1994 T1 (Machholz) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 16.37 | | S | 10.8 | AC | 31.7 | L | 6 | 68 | 3.0 | 2/ | | | BOR |
| 1994 10 29.38 | | S | 10.9 | NP | 20 | L | 6 | 49 | | 2 | | | HAL |
| 1994 11 01.04 | | B | 11.7 | HS | 20.3 | L | 6 | 79 | 3.0 | 5 | | | BIV |
| 1994 11 02.04 | | B | 11.5 | HS | 20.3 | L | 6 | 79 | 3.5 | 3 | | | BIV |
| 1994 11 04.98 | | S | 11.0 | TI | 11 | L | 8 | 32 | 1 | 6 | | | KYS |
| 1994 11 06.41 | | M | 10.9 | WA | 41 | L | 4 | 72 | | 5 | | | HAL |
| 1994 11 07.14 | | S | 9.7 | AC | 20 | L | 8 | 60 | 6 | 3 | | | CSU |
| 1994 11 11.69 | | C | 12.5 | HS | 20.0 | L | 6 | | 1.6 | | | | IT002 |
| 1994 11 22.95 | | S[ | 10.0 | AC | 20 | L | 8 | 60 | | | | | CSU |
| 1994 11 23.93 | | S[ | 10.0 | AC | 20 | L | 8 | 60 | | | | | CSU |
| 1994 11 26.67 | | C | 11.6 | HS | 41.0 | L | 6 | | 1.4 | | | | KOB01 |
| 1994 11 27.81 | | S | 10.5 | GA | 11 | L | 7 | 40 | 4 | 4 | | | BAR06 |
| 1994 11 27.86 | | S | 10.4 | GA | 11 | L | 7 | 32 | 4.5 | 3 | | | BAR06 |
| 1994 11 28.27 | | M | 10.7 | WA | 20 | L | 6 | 49 | | 5/ | | | HAL |
| 1994 11 29.69 | | C | 11.5 | HS | 41.0 | L | 6 | | 1.0 | | | | KOB01 |
| 1994 11 30.82 | | M | 10.9 | TI | 35 | L | 5 | 92 | 2.1 | 3/ | | | HOR02 |
| 1994 11 30.85 | | M | 11.4 | TI | 20 | R | 17 | 87 | 3 | 7 | | | LEH |
| 1994 11 30.91 | | S | 10.5 | AC | 25.4 | J | 6 | 58 | 2.5 | 5 | | | BOU |
| 1994 12 01.00 | | S | 10.6 | AC | 13.0 | L | 6 | 36 | 3.5 | 3/ | | | MEY |
| 1994 12 01.09 | a | S | 9.8 | AC | 31.7 | L | 6 | 68 | 2.3 | 6 | | | BOR |
| 1994 12 01.80 | | M | 10.6: | TI | 35 | L | 5 | 92 | 2.0 | 5/ | | | HOR02 |
| 1994 12 01.81 | | S | 11.3 | TI | 11 | L | 8 | 54 | 1.5 | 4 | | | KYS |
| 1994 12 01.86 | | S | 10.6 | AC | 13.0 | L | 6 | 36 | 3 | 2/ | | | MEY |
| 1994 12 01.87 | | M | 11.3 | TI | 20 | R | 17 | 87 | 4 | 6 | | | LEH |
| 1994 12 01.96 | | S | 10.6 | AC | 25.4 | J | 6 | 58 | 2.5 | 5 | | | BOU |
| 1994 12 02.83 | | M | 11.2 | TI | 35 | L | 5 | 92 | 1.8 | 5 | | | HOR02 |
| 1994 12 02.91 | | S | 10.7 | AC | 13.0 | L | 6 | 36 | 3 | 2/ | | | MEY |
| 1994 12 02.92 | | M | 11.5 | TI | 20 | R | 17 | 87 | 3.5 | 5 | | | LEH |
| 1994 12 03.13 | | S | 9.7 | AC | 31.7 | L | 6 | 68 | 2.2 | 6 | | | BOR |
| 1994 12 03.32 | | M | 10.6 | WA | 41 | L | 4 | 72 | | 6/ | 0.15 | 10 | HAL |
| 1994 12 03.79 | | M | 11.6 | HS | 10 | B | | 25 | 1.8 | 4/ | | | ZN0 |
| 1994 12 04.02 | | S | 10.6 | AC | 25.4 | J | 6 | 72 | 2.5 | 5 | | | BOU |
| 1994 12 04.07 | | S | 10.7 | GA | 11 | L | 7 | 40 | 3 | 4 | | | BAR06 |
| 1994 12 04.83 | | S | 10.7 | AC | 20.0 | T | 10 | 78 | & 1 | 2/ | | | COM |
| 1994 12 05.17 | | S | 10.9 | AA | 20 | T | 10 | 113 | 3.0 | 1/ | | | SPR |
| 1994 12 05.66 | | C | 11.0 | HS | 41.0 | L | 6 | | 1.1 | | | | KOB01 |
| 1994 12 05.89 | | S | 11.1 | AC | 15.2 | L | 5 | 42 | 2.5 | 2 | | | MOE |
| 1994 12 06.82 | | M | 10.6 | TI | 20 | L | 5 | 48 | 1.8 | 4 | | | HOR02 |
| 1994 12 06.88 | | S | 11.1 | AC | 15.2 | L | 5 | 42 | 3.0 | 2 | | | MOE |
| 1994 12 06.93 | | S | 10.6 | AC | 20.0 | T | 10 | 78 | & 1.5 | 2/ | | | COM |
| 1994 12 07.73 | | M | 11.7 | NP | 30 | L | 5 | 40 | 8 | | | | POP |
| 1994 12 09.02 | | S | 10.3 | HS | 20 | R | 14 | 40 | 2.3 | 3 | | | SHA02 |
| 1994 12 09.86 | | M | 11.7 | TI | 20 | R | 17 | 140 | 2.5 | 3/ | | | LEH |
| 1994 12 09.99 | | S | 10.8 | AC | 20.0 | T | 10 | 78 | & 1.5 | 3 | | | COM |
| 1994 12 10.00 | | S | 10.7 | AC | 20.0 | L | 4 | 80 | 3 | 2 | | | SCH04 |
| 1994 12 21.48 | | C | 12.7 | HS | 41.0 | L | 6 | | 0.78 | | | | KOB01 |
| 1994 12 21.78 | | S | 11.2 | AC | 25.4 | J | 6 | 72 | 2.0 | 2/ | | | BOU |
| 1994 12 22.07 | | M | 12.2 | GA | 35.9 | L | 7 | 85 | 0.95 | 4 | | | MOD |
| 1994 12 23.47 | | C | 12.4 | HS | 20.0 | L | 6 | | 1.2 | | | | IT002 |
| 1994 12 23.58 | | C | 12.8 | HS | 41.0 | L | 6 | | 0.85 | | | | KOB01 |
| 1994 12 23.85 | | S | 11.1 | AC | 15.2 | L | 5 | 42 | 2.0 | 2 | | | MOE |
| 1994 12 23.86 | | S | 11.4 | AC | 25.4 | J | 6 | 72 | 1.5 | 3 | | | BOU |
| 1994 12 24.77 | | S | 11.0: | AC | 13.0 | L | 6 | 36 | 2 | 1 | | | MEY |
| 1994 12 24.93 | | M | 11.8: | TI | 13 | L | 8 | 69 | 2.5 | 3 | | | HOR02 |
| 1994 12 26.20 | a | S | 10.7 | AC | 31.7 | L | 6 | 68 | 1.9 | 3/ | | | BOR |
| 1994 12 27.26 | | M | 11.7 | NP | 25.6 | L | 4 | 111 | 1.4 | 5 | | | MOR |
| 1994 12 27.56 | | C | 12.2 | GA | 60.0 | Y | 6 | | 2.5 | | > 3.8m | 35 | NAK01 |
| 1994 12 28.17 | | S | 10.9 | AA | 20 | T | 10 | 113 | 1.5 | 2 | | | SPR |
| 1994 12 28.46 | | S | 12.0 | GA | 25.4 | L | 4 | 114 | 1 | 5 | | | SEA |
| 1994 12 28.48 | | C | 12.3 | HS | 41.0 | L | 6 | | 1.7 | | | | KOB01 |
| 1994 12 29.00 | a | S | 10.9 | AC | 31.7 | L | 6 | 68 | 1.8 | 3 | | | BOR |
| 1994 12 29.28 | | S | 11.2 | PC | 20 | L | 6 | 49 | | 4 | | | HAL |
| 1994 12 30.24 | | M | 11.7 | NP | 25.6 | L | 4 | 111 | 1.6 | 4 | | | MOR |
| 1994 12 30.46 | | S | 12.0 | AC | 25.4 | L | 4 | 114 | | | | | SEA |
| 1994 12 30.91 | | S | 11.6 | AC | 20.0 | T | 10 | 78 | & 1 | 0/ | | | COM |

Comet C/1994 T1 (Machholz) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 31.16 | | S | 10.9 | AA | 20 | T | 10 | 81 | 1.5 | 2/ | | | SPR |
| 1994 12 31.46 | | S | 12.0 | AC | 25.4 | L | 4 | 114 | | | | | SEA |
| 1994 12 31.74 | | S | 11.2 | AC | 30.5 | L | 5 | 117 | 1.5 | 2 | | | VIC |
| 1994 12 31.75 | | S | 11.8 | AC | 44.5 | L | 5 | 146 | 1 | 5 | 0.03 | 60 | SAR02 |
| 1995 01 01.16 | | S | 11.3 | AA | 20 | T | 10 | 113 | 1.5 | 2/ | | | SPR |
| 1995 01 01.80 | | M | 12.5: | HS | 35 | L | 5 | 92 | 1.8 | 5 | | | HOR02 |
| 1995 01 01.89 | | S | 11.9 | AC | 44.5 | L | 5 | 146 | 1 | 4 | | | SAR02 |
| 1995 01 02.19 | | M | 11.8 | NP | 25.6 | L | 4 | 111 | 1.4 | 3/ | | | MOR |
| 1995 01 02.49 | | C | 13.0 | HS | 41.0 | L | 6 | | 1.2 | | >0.07 | 43 | KOB01 |
| 1995 01 02.83 | ! | V | 12.3 | YF | 20.0 | T | 2 | | & 5 | 6 | 0.05 | 10 | MIK |
| 1995 01 03.17 | | S | 11.7 | AA | 20 | T | 10 | 113 | 1.5 | 2 | | | SPR |
| 1995 01 03.79 | | M | 11.6 | HS | 10 | B | | 25 | 1.8 | 4/ | | | ZNO |
| 1995 01 03.81 | | S | 10.9 | AC | 30.5 | L | 5 | 117 | 2.0 | 5 | 0.05 | 0 | VIC |
| 1995 01 03.81 | | S | 11.8 | AC | 25.4 | J | 6 | 72 | 1.7 | 2 | | | BOU |
| 1995 01 03.82 | | S | 12.2: | AC | 28.0 | T | 10 | 112 | > 3 | 0 | | | COM |
| 1995 01 03.91 | | S | 11.5: | AC | 30.0 | L | 5 | 60 | 3 | 0/ | | | SCH04 |
| 1995 01 04.18 | | S | 11.9 | AA | 20 | T | 10 | 113 | 1.0 | 2 | | | SPR |
| 1995 01 04.83 | | S | 11.5 | AC | 25.4 | J | 6 | 72 | 2.8 | 2 | | | FEI |
| 1995 01 04.83 | | S | 11.9 | AC | 25.4 | J | 6 | 72 | 1.7 | 1 | | | BOU |
| 1995 01 04.88 | | S | 13.1 | AC | 20.3 | T | 10 | 167 | 0.3 | 3 | | | GAR02 |
| 1995 01 04.90 | | S | 12.1 | AC | 28.0 | T | 10 | 112 | 2 | 1 | | | COM |
| 1995 01 05.18 | | S | 11.9 | AA | 20 | T | 10 | 125 | 1.0 | 2 | | | SPR |
| 1995 01 06.19 | | S | 11.8 | AA | 20 | T | 10 | 113 | 1.0 | 2 | | | SPR |
| 1995 01 06.52 | | C | 13.5 | HS | 20.0 | L | 4 | | 0.9 | | | | OOY |
| 1995 01 06.80 | | S | 12.5 | HS | 44.5 | L | 5 | 156 | 0.5 | 3 | | | HAS02 |
| 1995 01 16.79 | | S | 12.0: | TI | 35 | L | 5 | 227 | 1.5 | 2 | | | HOR02 |
| 1995 01 17.71 | ! | V | 13.7 | YF | 20.0 | T | 2 | | & 1 | 9 | | | MIK |
| 1995 01 18.68 | | M | 12.4 | NP | 30 | L | 5 | 100 | 1 | 7 | | | POP |
| 1995 01 19.11 | | S | 12.6 | NP | 25.6 | L | 4 | 156 | 1.1 | 3 | | | MOR |
| 1995 01 20.79 | | S | 12.5 | AC | 25.4 | J | 6 | 88 | 1.2 | 1 | | | BOU |
| 1995 01 24.81 | | M | 12.1 | HS | 10 | B | | 25 | 2 | 4 | | | ZNO |
| 1995 01 27.05 | | M | 13.9 | GA | 35.9 | L | 7 | 164 | 0.40 | 4 | | | MOD |
| 1995 01 28.84 | | M | 13 : | HS | 35 | L | 5 | 92 | 2 | 1/ | | | HOR02 |
| 1995 01 29.07 | | M | 14.3 | GA | 35.9 | L | 7 | 164 | 0.35 | 4 | | | MOD |
| 1995 01 30.23 | | S | 13.0: | NP | 25.6 | L | 4 | 156 | 1.2 | 2 | | | MOR |
| 1995 01 31.74 | | M | 12.8: | HS | 15 | R | 13 | 65 | 1.4 | 3/ | | | ZNO |
| 1995 01 31.82 | | M | 12.8 | HS | 35 | L | 5 | 92 | 1.8 | 1/ | | | HOR02 |
| 1995 02 01.18 | | S | 13.3 | NP | 25.6 | L | 4 | 156 | 1.1 | 2 | | | MOR |
| 1995 02 01.79 | ! | V | 15.4 | YF | 20.0 | T | 2 | | 0.5 | 8 | & 2 m | 45 | MIK |
| 1995 02 07.74 | | M | 13.1: | HS | 15 | R | 13 | 65 | 1.4 | 4/ | | | ZNO |
| 1995 02 17.44 | | C | 14.1 | GA | 60.0 | Y | 6 | | 1.35 | | | 33 | NAK01 |
| 1995 02 19.80 | ! | V | 14.5 | YF | 20.0 | T | 2 | | 0.5 | 9 | & 2 m | 0 | MIK |
| 1995 03 01.75 | | I | 14 : | HS | 35 | L | 5 | 207 | 0.5 | | | | HOR02 |
| 1995 03 01.75 | | S | 14.0: | HS | 15 | R | 13 | 80 | 0.5 | 2 | | | ZNO |

Comet 2P/Encke

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 01 14.80 | | B | 9.4 | S | 20.3 | L | 6 | 40 | 5 | 6 | | | BIV |
| 1994 01 16.78 | | B | 9.2 | S | 20.3 | L | 6 | 40 | 4 | 5 | | | BIV |
| 1994 01 25.74 | | M | 7.4 | AA | 15.6 | L | 5 | 29 | | 7 | | | DIJ |

Comet 9P/Tempel 1 [= 1993c]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 03 06.39 | | S | 13.5 | AC | 44.5 | L | 4 | 167 | 0.8 | 3 | | | MOR03 |
| 1994 03 31.12 | | S | 12.0 | AC | 15 | R | 5 | 62 | 2.0 | 2 | | | MOR03 |
| 1994 04 01.09 | | S | 12.2 | AC | 44.5 | L | 4 | 80 | 1.0 | 2 | | | MOR03 |
| 1994 04 03.03 | | B | 11.4 | HS | 20.3 | L | 6 | 79 | 2 | 8 | | | BIV |
| 1994 04 04.08 | | S | 12.0 | AC | 15 | R | 5 | 62 | 1.6 | 2 | | | MOR03 |
| 1994 04 08.08 | | S | 11.9 | AC | 15 | R | 5 | 62 | 1.8 | 3 | | | MOR03 |
| 1994 04 11.09 | | S | 12.0 | AC | 15 | R | 5 | 62 | 1.5 | 3 | | | MOR03 |
| 1994 04 18.34 | s | S | 11.6 | AC | 44.5 | L | 4 | 80 | 1.4 | 4 | | | MOR03 |
| 1994 04 22.14 | | B | 11.1 | HS | 20.3 | L | 6 | 79 | 2 | 7 | | | BIV |
| 1994 04 22.36 | | S | 11.8 | AC | 15 | R | 5 | 62 | 1.9 | 3 | | | MOR03 |

Comet 9P/Tempel 1 [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 05 04.08 | | S | 11.3 | AC | 15 | R | 5 | 62 | 2.0 | 3 | | | MOR03 |
| 1994 05 06.54 | | M | 9.4 | AC | 20 | L | 6 | 50 | 3 | 5 | | | KAM03 |
| 1994 05 07.13 | | S | 11.2 | AC | 15 | R | 5 | 62 | 1.4 | | | | MOR03 |
| 1994 05 07.96 | | S | 9.3 | GA | 25.4 | J | 6 | 58 | 3.0 | 5 | | | BOU |
| 1994 05 09.09 | | S | 11.2 | AC | 15 | R | 5 | 62 | 2.4 | 3 | | | MOR03 |
| 1994 05 09.53 | | M | 9.4 | AC | 20 | L | 6 | 50 | 3.5 | 4 | | | KAM03 |
| 1994 05 11.11 | | S | 10.8 | AC | 15 | R | 5 | 42 | 3 | 3 | | | MOR03 |
| 1994 05 11.93 | | S | 9.3 | GA | 8.0 | B | | 15 | 3.5 | 2 | | | BOU |
| 1994 05 12.93 | | S | 9.4 | GA | 25.4 | J | 6 | 58 | 3.0 | 4/ | | | BOU |
| 1994 05 13.00 | | B | 10.7 | HS | 20.3 | L | 6 | 79 | 2.5 | 7 | | | BIV |
| 1994 05 13.94 | | S | 9.4 | GA | 25.4 | J | 6 | 58 | 3.0 | 4/ | | | BOU |
| 1994 05 14.10 | | S | 11.0 | AC | 15 | R | 5 | 62 | 2.9 | 3 | | | MOR03 |
| 1994 05 14.90 | | B | 10.8 | HS | 20.3 | L | 6 | 79 | 2.5 | 7 | | | BIV |
| 1994 05 15.89 | | B | 10.5 | HS | 20.3 | L | 6 | 79 | 2.5 | 7 | | | BIV |
| 1994 05 27.96 | | S | 9.3 | GA | 25.4 | J | 6 | 58 | 4 | 3 | | | BOU |
| 1994 05 29.94 | | S | 9.3 | AC | 25.4 | J | 6 | 58 | 3 | 3 | | | BOU |
| 1994 05 30.94 | | S | 9.3 | AC | 25.4 | J | 6 | 58 | 3 | 3/ | | | BOU |
| 1994 05 31.94 | | S | 9.4 | AC | 25.4 | J | 6 | 58 | 3 | 2/ | | | BOU |
| 1994 06 01.14 | | S | 10.6 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MOR03 |
| 1994 06 03.96 | | S | 9.4 | L | 25.4 | J | 6 | 58 | 3.0 | 3 | | | BOU |
| 1994 06 04.13 | | S | 10.6 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 06 05.18 | | S | 10.5 | AC | 15 | R | 5 | 42 | 4 | 2 | | | MOR03 |
| 1994 06 05.95 | | S | 9.5 | L | 25.4 | J | 6 | 58 | 3.0 | 2/ | | | BOU |
| 1994 06 06.97 | | S | 9.2 | AA | 8.0 | B | | 11 | 6 | 5 | | | DES01 |
| 1994 06 07.97 | | S | 9.1 | AA | 8.0 | B | | 11 | 5 | 5 | | | DES01 |
| 1994 06 09.99 | | S | 9.1 | AA | 8.0 | B | | 11 | 6 | 4/ | | | DES01 |
| 1994 06 10.18 | | S | 10.9 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 06 10.98 | | S | 9.0 | AA | 8.0 | B | | 11 | 7 | 5 | | | DES01 |
| 1994 06 11.87 | | S | 9.0 | AA | 8.0 | B | | 11 | 7 | 4 | | | DES01 |
| 1994 06 11.95 | | S | 9.4 | AC | 25.4 | J | 6 | 58 | 2.5 | 2 | | | BOU |
| 1994 06 12.93 | | S | 9.1 | AA | 8.0 | B | | 11 | 6 | 4 | | | DES01 |
| 1994 06 13.13 | | S | 10.3 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 06 13.96 | | S | 9.1 | AA | 8.0 | B | | 11 | 6 | 4/ | | | DES01 |
| 1994 06 14.96 | | S | 9.5 | AC | 25.4 | J | 6 | 58 | 2.5 | 2 | | | BOU |
| 1994 06 14.97 | | S | 9.2 | AA | 8.0 | B | | 11 | 6 | 5 | | | DES01 |
| 1994 06 16.00 | | S | 9.2 | AA | 8.0 | B | | 11 | 6 | 5/ | | | DES01 |
| 1994 06 16.99 | | S | 9.2 | AA | 8.0 | B | | 11 | 5 | 6 | | | DES01 |
| 1994 06 23.95 | | S | 9.1 | AA | 8.0 | B | | 11 | 5 | 5/ | | | DES01 |
| 1994 06 25.94 | | S | 9.2 | AA | 8.0 | B | | 11 | 7 | 6 | | | DES01 |
| 1994 06 26.72 | | S | 9.8: | S | 20 | L | 8 | 83 | | | | | COO02 |
| 1994 06 26.89 | | S | 9.2 | AA | 8.0 | B | | 11 | 7 | 6 | | | DES01 |
| 1994 06 27.96 | | S | 9.3 | AA | 8.0 | B | | 11 | 7 | 6 | | | DES01 |
| 1994 06 28.87 | | S | 9.3 | AA | 8.0 | B | | 11 | 8 | 6 | | | DES01 |
| 1994 06 29.96 | | S | 9.4 | AA | 8.0 | B | | 11 | 8 | 5/ | | | DES01 |
| 1994 06 30.99 | | S | 9.4 | AA | 8.0 | B | | 11 | 7 | 5 | | | DES01 |
| 1994 07 01.97 | | S | 9.4 | AA | 8.0 | B | | 11 | 7 | 5/ | | | DES01 |
| 1994 07 02.92 | | S | 9.4 | AA | 8.0 | B | | 11 | 5 | 5/ | | | DES01 |
| 1994 07 03.71 | | S | 9.8: | S | 20 | L | 8 | 83 | | 3 | | | COO02 |
| 1994 07 04.93 | | S | 9.5 | AA | 8.0 | B | | 11 | 6 | 6 | | | DES01 |
| 1994 07 05.97 | | S | 9.5 | AA | 8.0 | B | | 11 | 5 | 6 | | | DES01 |
| 1994 07 06.98 | | S | 9.6 | AA | 8.0 | B | | 11 | 5 | 6/ | | | DES01 |
| 1994 07 09.97 | | S | 9.7 | AA | 8.0 | B | | 11 | 4 | 5/ | | | DES01 |
| 1994 07 10.95 | | S | 9.7 | AA | 8.0 | B | | 11 | 4 | 5 | | | DES01 |
| 1994 07 11.12 | | S | 10.4 | AC | 15 | R | 5 | 42 | 3 | | | | MOR03 |
| 1994 07 11.96 | | S | 9.7 | AA | 8.0 | B | | 11 | 4 | 5/ | | | DES01 |
| 1994 07 12.97 | | S | 9.8 | AA | 8.0 | B | | 11 | 4 | 6 | | | DES01 |
| 1994 07 13.95 | | S | 9.8 | AA | 8.0 | B | | 11 | 3 | 6 | | | DES01 |
| 1994 12 22.39 | a | C | 15.7 | GA | 60.0 | Y | 6 | | 0.75 | | | | NAK01 |

Comet 10P/Tempel 2

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 04.60 | | C | 16.5 | HS | 20.0 | L | 6 | | 0.6 | | | | IT002 |
| 1994 12 23.49 | | C | 16.0 | HS | 20.0 | L | 6 | | 0.8 | | | | IT002 |
| 1994 12 27.56 | | C | 17.7 | GA | 60.0 | Y | 6 | | 0.45 | | | | NAK01 |
| 1995 02 22.48 | | C | 18.6: | GA | 60.0 | Y | 6 | | 0.4 | | | | NAK01 |

Comet 16P/Brooks 2 [= 1994j]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 09 10.08 | | M | 13.1 | HS | 20 | R | 17 | 140 | 1 | 1/ | | | LEH |
| 1994 10 01.71 | | C | 15.2 | HS | 20.0 | L | 6 | | 0.6 | | | | IT002 |
| 1994 10 04.89 | | M | 13.0 | HS | 20 | R | 17 | 140 | 1.5 | 2 | | | LEH |
| 1994 10 11.45 | | S | 14.0 | WA | 41 | L | 4 | 183 | | 3 | | | HAL |
| 1994 10 14.76 | | C | 15.1 | GA | 60.0 | Y | 6 | | 0.85 | | 0.07 | 253 | NAK01 |
| 1994 10 26.88 | | M | 13.5 | HS | 20 | R | 17 | 140 | 1.5 | 4 | | | LEH |
| 1994 11 01.83 | | M | 13.2 | HS | 20 | R | 17 | 140 | 1 | 3/ | | | LEH |
| 1994 11 11.67 | | C | 14.9 | HS | 20.0 | L | 6 | | 1.0 | | | | IT002 |
| 1994 11 26.54 | | C | 14.1 | HS | 20.0 | L | 6 | | 1.2 | | | | IT002 |
| 1994 11 29.66 | | C | 15.1 | HS | 41.0 | L | 6 | | 0.2 | | | | KOB01 |
| 1994 12 01.81 | | O[ | 14.2 | HS | 35 | L | 5 | 92 | & 1 | | | | HOR02 |
| 1994 12 04.58 | | C | 15.2 | HS | 20.0 | L | 6 | | 0.9 | | | | IT002 |
| 1994 12 27.55 | | C | 17.1 | GA | 60.0 | Y | 6 | | 0.3 | | | 65 | NAK01 |
| 1994 12 28.50 | | C | 17.3 | HS | 41.0 | L | 6 | | 0.29 | | | | KOB01 |
| 1995 02 22.49 | | C | 18.4: | GA | 60.0 | Y | 6 | | 0.35 | | | | NAK01 |
| 1995 02 24.46 | | C | 18.7 | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |

Comet 19P/Borrelly [= 1994l]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 09 03.35 | | S | 11.0: | GA | 20 | L | 8 | 130 | 1 | 0 | | | DID |
| 1994 09 05.14 | | S | 10.0: | S | 40 | L | 4 | 102 | | 5 | | | C0002 |
| 1994 09 06.12 | | S | 10.4 | AC | 25.4 | J | 6 | 58 | 2.6 | 2/ | | | BOU |
| 1994 09 06.37 | | S | 11.3 | AC | 44.5 | L | 4 | 80 | 1.5 | 4 | | | MOR03 |
| 1994 09 07.13 | | S | 10.3 | AC | 25.4 | J | 6 | 58 | 2.6 | 2 | | | BOU |
| 1994 09 09.37 | | S | 11.2 | AC | 15 | R | 5 | 62 | 2.0 | 2 | | | MOR03 |
| 1994 09 10.37 | | S | 10.9 | AC | 15 | R | 5 | 62 | 1.1 | 2 | | | MOR03 |
| 1994 09 11.12 | | S | 10.0: | S | 40 | L | 4 | 102 | | 5 | | | C0002 |
| 1994 09 12.34 | | S | 9.8 | GA | 20 | L | 8 | 46 | 1 | 0 | | | DID |
| 1994 09 15.06 | | S | 10.5: | S | 31 | C | 17 | 77 | | | | | OVE |
| 1994 09 15.30 | | S | 9.8 | GA | 20 | L | 8 | 46 | 1 | 0 | | | DID |
| 1994 09 18.39 | | S | 10.5 | AC | 15 | R | 5 | 62 | 1.5 | 2 | | | MOR03 |
| 1994 09 28.13 | | S | 9.0 | AC | 25.4 | J | 6 | 58 | 3.0 | 2/ | | | BOU |
| 1994 09 30.43 | | S | 9.8 | GA | 20 | L | 8 | 46 | 2 | 1/ | | | DID |
| 1994 10 01.20 | | S | 9.3 | AA | 8.0 | B | | 11 | 3 | 7 | | | DES01 |
| 1994 10 01.75 | | C | 12.0 | HS | 20.0 | L | 6 | | 1.2 | | | | IT002 |
| 1994 10 02.10 | | S | 9.5 | S | 40 | L | 4 | 102 | | 5 | | | C0002 |
| 1994 10 02.15 | | S | 9.4 | AA | 11 | L | 7 | 32 | 6 | 4 | | | VEL03 |
| 1994 10 02.24 | | S | 9.1 | AA | 8.0 | B | | 11 | 3 | 7 | | | DES01 |
| 1994 10 02.41 | | S | 10.3 | AC | 15 | R | 5 | 42 | 2.5 | 3 | | | MOR03 |
| 1994 10 02.80 | | M | 10.3 | HS | 16.0 | W | 4 | 49 | 3 | 4 | | | TSU02 |
| 1994 10 03.02 | | S | 8.9 | AA | 8.0 | B | | 11 | 3 | 7 | | | DES01 |
| 1994 10 03.37 | | S | 9.1 | AC | 31.7 | L | 6 | 68 | 2.9 | 6/ | | | BOR |
| 1994 10 04.20 | | S | 8.9 | AA | 8.0 | B | | 11 | 3 | 6/ | | | DES01 |
| 1994 10 04.51 | | S | 8.3 | S | 20.0 | T | 10 | 63 | 1.9 | 3 | | | PRY |
| 1994 10 04.66 | | S | 7.8 | SC | 5.0 | B | | 10 | | | | | SEA01 |
| 1994 10 04.66 | | S | 8.0 | SC | 8.0 | B | | 15 | 3 | 2 | | | SEA01 |
| 1994 10 05.06 | | B | 10.0: | AA | 11 | L | 7 | 32 | 4.7 | 5 | | | VEL03 |
| 1994 10 05.24 | | S | 8.9 | AA | 8.0 | B | | 11 | 3 | 6/ | | | DES01 |
| 1994 10 06.02 | | S | 8.8 | GA | 11 | L | 7 | 40 | 2.3 | 4 | | | BAR06 |
| 1994 10 07.04 | | S | 8.5 | GA | 11 | L | 7 | 40 | 3 | 4 | | | BAR06 |
| 1994 10 07.05 | | S | 9.7 | AA | 11 | L | 7 | 32 | 4.8 | 3 | | | VEL03 |
| 1994 10 07.23 | | S | 8.7 | AA | 8.0 | B | | 11 | 3 | 6/ | | | DES01 |
| 1994 10 07.37 | | S | 9.0 | AC | 31.7 | L | 6 | 68 | 2.4 | 6/ | | | BOR |
| 1994 10 08.24 | | S | 8.7 | AA | 8.0 | B | | 11 | 4 | 6 | | | DES01 |
| 1994 10 08.36 | | S | 9.9 | AC | 15 | R | 5 | 42 | 2.5 | 3 | | | MOR03 |
| 1994 10 08.38 | | S | 9.2 | GA | 20 | L | 8 | 46 | 3 | 2 | | | DID |
| 1994 10 08.69 | | S | 8.0 | SC | 5.0 | B | | 10 | 6 | 2 | | | SEA01 |
| 1994 10 08.69 | | S | 8.2 | SC | 8.0 | B | | 15 | 5 | 2 | | | SEA01 |
| 1994 10 09.02 | | S | 8.5 | AA | 11 | L | 7 | 32 | 6.4 | 4 | | | BAR06 |
| 1994 10 09.20 | | S | 8.5 | AA | 8.0 | B | | 11 | 4 | 6 | | | DES01 |
| 1994 10 09.74 | | S | 8.2 | AA | 5.0 | B | | 10 | 4 | 2 | | | SEA01 |
| 1994 10 09.74 | | S | 8.3 | AA | 8.0 | B | | 15 | 5 | 4 | | | SEA01 |
| 1994 10 10.02 | | S | 8.5 | AA | 11 | L | 7 | 32 | 4.5 | 4 | | | BAR06 |
| 1994 10 11.35 | | S | 9.0 | GA | 20 | L | 8 | 46 | 2 | 3 | | | DID |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 11.36 | | S | 10.3 | AC | 15 | R | 5 | 42 | 3 | 4 | | | MOR03 |
| 1994 10 11.37 | | S | 8.9 | AC | 31.7 | L | 6 | 68 | 2.3 | 7 | | | BOR |
| 1994 10 12.09 | | S | 9.1 | AA | 11 | L | 7 | 32 | 4.5 | 2 | 0.1 | 25 | VEL03 |
| 1994 10 12.38 | | S | 8.9 | AC | 31.7 | L | 6 | 68 | 2.6 | 7 | ? | 100 | BOR |
| 1994 10 12.41 | | S | 10.0 | AC | 15 | R | 5 | 42 | 3.5 | 4 | | | MOR03 |
| 1994 10 13.02 | | S | 9.5: | GA | 11 | L | 7 | 40 | & 2.5 | 2/ | | | BAR06 |
| 1994 10 13.06 | | S | 9.2 | S | 40 | L | 4 | 102 | | 5 | | | C0002 |
| 1994 10 13.29 | | S | 9.0 | GA | 20 | L | 8 | 46 | 5 | 3 | | | DID |
| 1994 10 13.96 | | S | 9.2 | GA | 11 | L | 7 | 40 | 4 | 4 | | | BAR06 |
| 1994 10 13.97 | | S | 9.0 | GA | 11 | L | 7 | 32 | 5 | 3 | | | BAR06 |
| 1994 10 14.05 | | S | 10.0: | S | 31 | C | 17 | 77 | | | | | OVE |
| 1994 10 14.83 | | S | 8.6 | HS | 41.0 | L | 6 | 80 | 3 | 5 | | | KOB01 |
| 1994 10 15.34 | | S | 9.8 | AC | 15 | R | 5 | 42 | 3.5 | 4 | | | MOR03 |
| 1994 10 15.76 | | M | 9.0 | S | 16.0 | W | 4 | 49 | 3 | 4 | | | TSU02 |
| 1994 10 16.06 | | S | 9.3 | GA | 8 | R | 6 | 20 | 4 | 4 | | | BAR06 |
| 1994 10 16.38 | | S | 8.8 | AC | 31.7 | L | 6 | 68 | 3.0 | 6/ | | | BOR |
| 1994 10 18.14 | | S | 9.3 | AA | 11 | L | 7 | 32 | 5 | 4 | | | VEL03 |
| 1994 10 27.66 | | S | 7.5 | AA | 8.0 | B | | 15 | | | | | SEA01 |
| 1994 10 28.31 | | S | 9.4 | AC | 15 | R | 5 | 42 | 3.5 | 3 | | | MOR03 |
| 1994 10 28.93 | | S | 8.7 | AA | 11 | L | 7 | 32 | 6.8 | 3 | | | BAR06 |
| 1994 10 29.39 | | M | 9.3 | NP | 20 | L | 6 | 49 | | | | | HAL |
| 1994 10 30.05 | | S | 8.7 | S | 40 | L | 4 | 102 | | 4 | ? | | C0002 |
| 1994 11 01.08 | | S | 9.0 | S | 6.7 | B | | 20 | & 7 | 5 | | | SCI |
| 1994 11 01.10 | | B | 8.8 | S | 20.3 | L | 6 | 40 | 3.5 | 6 | 0.10 | 280 | BIV |
| 1994 11 01.13 | | B | 9.1 | AA | 11 | L | 7 | 32 | 6 | 5 | 0.1 | 90 | VEL03 |
| 1994 11 01.92 | | M | 10.0 | TI | 20 | R | 17 | 87 | 4 | 4 | | | LEH |
| 1994 11 02.05 | | B | 8.7 | S | 6.6 | B | | 20 | &10 | 3/ | | | PLE01 |
| 1994 11 02.05 | | S | 9.0 | AA | 11 | L | 7 | 32 | 6 | 3 | 0.1 | 90 | VEL03 |
| 1994 11 02.08 | | B | 8.9 | S | 20.3 | L | 6 | 40 | 3.5 | 5 | 0.10 | 280 | BIV |
| 1994 11 02.12 | | S | 8.4 | AA | 11 | L | 7 | 32 | 5 | 5/ | | | BAR06 |
| 1994 11 02.14 | | B | 9.2 | AA | 11 | L | 7 | 32 | 6 | 4 | 0.1 | 90 | VEL03 |
| 1994 11 02.67 | | S | 8.4 | AA | 8.0 | B | | 15 | 6 | 2 | | | SEA01 |
| 1994 11 03.04 | | B | 9.0 | S | 6.6 | B | | 20 | & 6 | 4 | | | FIL04 |
| 1994 11 03.08 | | B | 8.7 | S | 6.7 | B | | 20 | & 5 | 5 | | | SCI |
| 1994 11 03.10 | | B | 8.8 | S | 6.6 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 11 03.11 | | S | 8.5: | S | 6 | R | | 32 | | 1 | | | CH001 |
| 1994 11 03.14 | | S | 8.3 | AA | 11 | L | 7 | 32 | 6.5 | 4 | | | BAR06 |
| 1994 11 03.41 | | S | 8.6 | AC | 15 | R | 5 | 42 | 4.5 | 4 | | | MOR03 |
| 1994 11 04.08 | | S | 8.5: | S | 6 | R | | 32 | | 1 | | | CH001 |
| 1994 11 04.08 | | S | 9.1: | S | 6.7 | B | | 20 | & 5 | 4/ | | | SCI |
| 1994 11 04.10 | | B | 9.5 | AA | 11 | L | 7 | 32 | 7 | 4 | | | VEL03 |
| 1994 11 04.12 | | S | 8.1: | AA | 11 | L | 7 | 32 | & 6 | 3/ | | | BAR06 |
| 1994 11 04.14 | | B | 9.8: | S | 6.6 | B | | 20 | & 7 | 3/ | | | FIL04 |
| 1994 11 04.15 | | S | 9.2 | AA | 11 | L | 7 | 32 | 7 | 4 | 0.1 | 100 | VEL03 |
| 1994 11 04.67 | | S | 8.3 | AA | 5.0 | B | | 10 | 8 | 3 | | | SEA01 |
| 1994 11 04.67 | | S | 8.4 | AA | 8.0 | B | | 15 | 6 | 5 | | | SEA01 |
| 1994 11 04.94 | | B | 9.8: | S | 11 | L | 7 | 32 | 3 | 1 | | | BRU |
| 1994 11 04.95 | | S | 8.3 | AA | 11 | L | 7 | 40 | 7.2 | 4 | | | BAR06 |
| 1994 11 04.96 | | B | 9.7 | S | 15 | L | 6 | 80 | | | | | SIW |
| 1994 11 05.02 | | S | 8.2: | S | 11 | L | | 32 | | 1 | | | CH001 |
| 1994 11 05.03 | | S | 8.3 | AA | 8.8 | B | | 12 | | 4 | | | BAR06 |
| 1994 11 05.07 | | B | 9.0 | S | 11.0 | B | | 20 | &10 | 5 | &0.3 | 305 | FIL04 |
| 1994 11 05.08 | | S | 8.9: | S | 6.7 | B | | 20 | & 5 | 4/ | | | SCI |
| 1994 11 05.09 | | B | 9.2 | AA | 11 | L | 7 | 32 | 6 | 3 | 0.1 | 90 | VEL03 |
| 1994 11 05.09 | | S | 8.9 | AA | 11 | L | 7 | 32 | 6 | 3 | 0.1 | 90 | VEL03 |
| 1994 11 05.15 | | S | 8.9 | S | 10 | M | 10 | 20 | | 2 | | | PAR03 |
| 1994 11 05.22 | | B | 8.8 | S | 11.0 | B | | 20 | &14 | 4 | &0.5 | 308 | PLE01 |
| 1994 11 05.65 | | S | 8.4 | AA | 5.0 | B | | 10 | 8 | 4 | | | SEA01 |
| 1994 11 05.65 | | S | 8.5 | AA | 8.0 | B | | 15 | 5 | 6 | | | SEA01 |
| 1994 11 05.96 | | S | 9.4 | S | 15 | L | 6 | 80 | | | | | SIW |
| 1994 11 05.99 | | B | 9.6: | S | 11 | L | 7 | 54 | 5 | 6 | | | BRU |
| 1994 11 06.02 | | S | 8.2 | S | 11 | L | | 32 | & 5 | 1 | | | CH001 |
| 1994 11 06.02 | | S | 8.3 | AA | 11 | L | 7 | 32 | 5 | 4/ | | | BAR06 |
| 1994 11 06.08 | | S | 8.8 | S | 6.7 | B | | 20 | & 5 | 4 | | | SCI |
| 1994 11 06.12 | | B | 9.0 | S | 11.0 | B | | 20 | & 7 | 4/ | &0.2 | 345 | FIL04 |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 11 06.15 | | S | 8.5 | GA | 20 | L | 8 | 46 | 5 | 7 | | | DID |
| 1994 11 06.18 | | B | 8.8 | S | 11.0 | B | | 20 | &12 | 4/ | &0.4 | 310 | PLE01 |
| 1994 11 06.44 | | S | 8.7 | NP | 5.0 | B | | 10 | | | | | HAL |
| 1994 11 06.71 | | M | 8.2 | AA | 10.0 | B | | 25 | 5 | 5 | | | SEA |
| 1994 11 06.98 | | S | 8.7 | AA | 11 | L | 7 | 32 | 6.2 | 5 | | | BAR06 |
| 1994 11 07.01 | | B | 8.5 | S | 35 | M | 10 | 90 | &14 | 5 | | | PLE01 |
| 1994 11 07.01 | | S | 8.7 | AA | 8.8 | B | | 12 | | 5 | | | BAR06 |
| 1994 11 07.01 | | S | 9.4 | S | 15 | L | 6 | 80 | | 3 | | | SIW |
| 1994 11 07.02 | | S | 8.0 | S | 11 | L | | 32 | | 1 | | | CHO01 |
| 1994 11 07.07 | | S | 8.8 | S | 6.7 | B | | 20 | & 5 | 4 | | | SCI |
| 1994 11 07.14 | | B | 8.9 | S | 15.2 | L | 8 | 39 | | 4 | | | GAM |
| 1994 11 07.15 | | B | 9.0 | AA | 11 | L | 7 | 32 | 9 | 4 | | | VEL03 |
| 1994 11 07.15 | | S | 8.9 | AA | 11 | L | 7 | 32 | 9 | 4 | | | VEL03 |
| 1994 11 07.44 | | S | 8.7 | AC | 15 | R | 5 | 42 | 4 | 4 | | | MOR03 |
| 1994 11 07.97 | | S | 8.7 | AA | 11 | L | 7 | 32 | 5 | 5/ | | | BAR06 |
| 1994 11 08.03 | | S | 8.7 | AA | 8.8 | B | | 12 | 4.5 | 4 | | | BAR06 |
| 1994 11 08.05 | | S | 8.5 | S | 11 | L | | 32 | & 4 | 1 | | | CHO01 |
| 1994 11 08.12 | | S | 9.0 | AA | 11 | L | 7 | 32 | 8 | 4 | | | VEL03 |
| 1994 11 08.71 | | S | 8.4 | AA | 10.0 | B | | 25 | | | | | SEA |
| 1994 11 08.73 | | S | 8.7 | AA | 8.0 | B | | 15 | 4 | 5 | | | SEA01 |
| 1994 11 09.67 | | S | 8.3 | AA | 5.0 | B | | 10 | 7 | 3 | | | SEA01 |
| 1994 11 09.67 | | S | 8.5 | AA | 8.0 | B | | 15 | 6 | 4 | | | SEA01 |
| 1994 11 09.97 | | S | 8.1 | AA | 18.7 | L | 5 | 38 | 4.5 | 3 | | | SHU |
| 1994 11 10.01 | | S | 8.2 | AA | 14 | L | 7 | 50 | 5 | 3 | | | NEK |
| 1994 11 10.07 | | B | 8.6 | S | 11.0 | B | | 20 | &12 | 4/ | | | PLE01 |
| 1994 11 10.19 | | B | 9.2 | S | 20.3 | T | 10 | 77 | 3.5 | 7 | 0.09 | 260 | BIV |
| 1994 11 10.40 | | S | 8.6 | AC | 15 | R | 5 | 42 | 3 | 4 | | | MOR03 |
| 1994 11 11.40 | | | | | 31.7 | L | 6 | 68 | 2.7 | 7 | 0.15 | 265 | BOR |
| 1994 11 11.40 | | S | 8.0 | AC | 5.0 | B | | 10 | 7.5 | 5/ | | | BOR |
| 1994 11 11.44 | | S | 8.6 | AC | 15 | R | 5 | 42 | 3.5 | 5 | | | MOR03 |
| 1994 11 11.73 | | S | 8.5 | AA | 8.0 | B | | 15 | 5 | 3 | | | SEA01 |
| 1994 11 11.76 | | C | 9.1 | HS | 20.0 | L | 6 | | 4.5 | | | | ITO02 |
| 1994 11 13.08 | | S | 8.8 | S | 6.0 | B | | 20 | & 3 | 2 | | | OSS |
| 1994 11 13.09 | | S | 9.0 | S | 11 | L | | 32 | | 1 | | | CHO01 |
| 1994 11 13.14 | | S | 8.6 | AA | 11 | L | 7 | 32 | 3 | 4 | 0.07 | 280 | BAR06 |
| 1994 11 13.17 | | S | 8.9 | S | 10 | M | 10 | 20 | | 2 | | | PAR03 |
| 1994 11 14.00 | | B | 8.5 | S | 11.0 | B | | 20 | &12 | 4 | | | PLE01 |
| 1994 11 14.07 | | B | 9.8: | S | 11 | L | 7 | 54 | 6 | 3 | | | BRU |
| 1994 11 14.08 | | S | 8.9 | S | 11 | L | | 32 | & 4 | 1 | | | CHO01 |
| 1994 11 14.13 | | B | 8.9 | AA | 11 | L | 7 | 32 | 7 | 3 | | | VEL03 |
| 1994 11 14.13 | | S | 8.9 | AA | 11 | L | 7 | 32 | 7 | 3 | | | VEL03 |
| 1994 11 14.33 | | S | 8.2 | AA | 8.0 | B | | 15 | 4.5 | 3/ | | | BOU |
| 1994 11 14.33 | | S | 8.4 | AA | 8.0 | B | | 15 | & 5 | 4 | | | COM |
| 1994 11 14.52 | | S | 8.6 | NP | 10.8 | L | 4 | 43 | | | | | HAL |
| 1994 11 15.03 | | B | 8.4 | S | 11.0 | B | | 20 | &10 | 4 | | | PLE01 |
| 1994 11 15.33 | | S | 8.2 | AA | 8.0 | B | | 15 | 5 | 4 | | | BOU |
| 1994 11 15.34 | | S | 8.5 | AA | 5.0 | B | | 10 | & 4 | 3/ | | | COM |
| 1994 11 15.42 | | S | 8.6 | AC | 15 | R | 5 | 42 | 4.5 | 4 | | | MOR03 |
| 1994 11 19.07 | | B | 8.4 | S | 11.0 | B | | 20 | &10 | 4 | | | PLE01 |
| 1994 11 19.95 | | S | 8.8: | S | 6.7 | B | | 20 | & 6 | 3/ | | | SCI |
| 1994 11 19.99 | | B | 8.4 | S | 11.0 | B | | 20 | & 9 | 4 | | | PLE01 |
| 1994 11 20.01 | | B | 8.4 | S | 11.0 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 11 21.12 | | B | 8.5 | S | 6.6 | B | | 20 | &10 | 4 | | | PLE01 |
| 1994 11 24.09 | | B | 8.5 | S | 6.6 | B | | 20 | &10 | 4 | | | PLE01 |
| 1994 11 26.05 | | S | 9.0 | S | 20 | L | 8 | 83 | | | | | COO02 |
| 1994 11 26.62 | | C | 8.8 | HS | 20.0 | L | 6 | | 5.6 | | | | ITO02 |
| 1994 11 26.68 | | C | 8.5 | HS | 41.0 | L | 6 | | 5.5 | | | | KOB01 |
| 1994 11 27.00 | | B | 8.4 | S | 11.0 | B | | 20 | &12 | 4 | &0.4 | 315 | PLE01 |
| 1994 11 27.01 | | S | 8.5 | S | 6.6 | B | | 20 | & 9 | | | | FIL04 |
| 1994 11 27.07 | | S | 9.1 | S | 11 | L | | 32 | & 4 | 1 | | | CHO01 |
| 1994 11 27.91 | | S | 8.8 | S | 8.0 | B | | 15 | & 6 | 3 | | | DUS |
| 1994 11 28.33 | | S | 8.5 | NP | 5.0 | B | | 10 | | | | | HAL |
| 1994 11 28.88 | | S | 8.8 | S | 8.0 | B | | 15 | & 6 | 3 | | | DUS |
| 1994 11 29.72 | | C | 8.4 | HS | 41.0 | L | 6 | | 2.8 | | >0.04 | 270 | KOB01 |
| 1994 11 29.94 | | S | 8.5: | S | 8.0 | B | | 15 | & 6 | 3 | | | DUS |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 11 30.11 | | B | 8.5 | S | 10 | M | 10 | 25 | & 8 | 4 | | | PLE01 |
| 1994 11 30.87 | | M | 8.6 | S | 10.0 | B | 4 | 25 | 7.2 | 5 | | | LEH |
| 1994 11 30.90 | | B | 9.3: | TI | 8.0 | B | | 10 | 6 | 3 | | | HOR02 |
| 1994 11 30.91 | | S | 8.8 | S | 6.7 | B | | 20 | & 6 | 4 | | | SCI |
| 1994 11 30.93 | | S | 8.7 | S | 8.0 | B | | 15 | & 6 | 3 | | | DUS |
| 1994 11 30.94 | | B | 9.1 | S | 8.0 | B | | 20 | 4.3 | 2 | | | SPE01 |
| 1994 11 30.94 | | M | 8.1 | AC | 25.4 | J | 6 | 47 | 5 | 5/ | 0.15 | 270 | BOU |
| 1994 12 01.02 | | S | 7.9 | AC | 13.0 | L | 6 | 36 | 5.5 | 4 | | | MEY |
| 1994 12 01.03 | | B | 8.5 | S | 10.0 | B | | 25 | &10 | 4 | | | PLE01 |
| 1994 12 01.85 | | S | 9.1 | TI | 11 | L | 8 | 32 | 3 | 3 | | | KYS |
| 1994 12 01.88 | | S | 8.0 | AC | 13.0 | L | 6 | 36 | 5 | 4 | | | MEY |
| 1994 12 01.89 | | B | 8.3 | TI | 8.0 | B | | 10 | 8 | 2/ | | | HOR02 |
| 1994 12 01.89 | | M | 9.2 | NP | 30 | L | 5 | 40 | 6 | 4 | | | POP |
| 1994 12 01.91 | | M | 8.5 | S | 10.0 | B | 4 | 25 | 3.5 | 5 | | | LEH |
| 1994 12 01.93 | | S | 8.4 | AA | 6.0 | B | | 20 | 12 | 5 | | | CSU |
| 1994 12 01.94 | | | | | 20 | R | 17 | 140 | 3 | 6 | 0.07 | 99 | LEH |
| 1994 12 01.94 | | S | 8.2 | AC | 20.0 | T | 10 | 78 | & 4 | 3 | | | COM |
| 1994 12 01.94 | | S | 8.4 | AA | 15.6 | L | 10 | 54 | 12 | 6 | | | KOS |
| 1994 12 01.94 | | S | 9.2: | S | 6.7 | B | | 20 | & 5 | 3/ | | | SCI |
| 1994 12 01.96 | | S | 8.2 | AC | 25.4 | J | 6 | 47 | 5 | 6 | | | BOU |
| 1994 12 01.97 | | B | 9.4 | S | 6.6 | B | | 20 | &10 | 4/ | | | FIL04 |
| 1994 12 02.01 | | B | 8.6 | S | 11.0 | B | | 20 | &10 | 4/ | | | PLE01 |
| 1994 12 02.08 | | S | 8.8 | S | 11 | L | | 32 | | 1 | | | CHO01 |
| 1994 12 02.14 | | B | 9.3 | AA | 11 | L | 7 | 32 | 5 | 4 | | | VEL03 |
| 1994 12 02.14 | | S | 9.0 | AA | 11 | L | 7 | 32 | 5 | 4 | | | VEL03 |
| 1994 12 02.19 | | S | 8.7 | AC | 20.0 | L | 4 | 42 | 5 | 6/ | &0.2 | 270 | SCH04 |
| 1994 12 02.20 | | S | 8.6 | AC | 8.0 | B | | 15 | 5 | 6/ | | | SCH04 |
| 1994 12 02.86 | | S | 9.0 | TI | 11 | L | 8 | 54 | 2.8 | 4/ | | | KYS |
| 1994 12 02.93 | | M | 9.0 | S | 10.0 | B | 4 | 25 | 3.8 | 4/ | | | LEH |
| 1994 12 02.94 | | B | 8.9 | S | 6.6 | B | | 20 | & 8 | 3 | | | FIL04 |
| 1994 12 02.96 | | S | 9.4: | S | 6.7 | B | | 20 | & 4 | 3/ | | | SCI |
| 1994 12 02.99 | | B | 8.7 | S | 11.0 | B | | 20 | & 8 | 4/ | | | PLE01 |
| 1994 12 03.11 | | S | 8.2 | AA | 15.6 | L | 10 | 54 | 13 | 6 | | | KOS |
| 1994 12 03.36 | | | | | 41 | L | 4 | 72 | | | 0.17 | 267 | HAL |
| 1994 12 03.36 | | S | 8.4 | NP | 5.0 | B | | 10 | | | | | HAL |
| 1994 12 03.42 | | S | 8.1 | AC | 5.0 | B | | 10 | 8 | 5 | | | BOR |
| 1994 12 03.65 | | M | 8.5 | S | 20 | L | 6 | 50 | 6 | 5 | | | KAM03 |
| 1994 12 03.77 | | M | 9.1 | TI | 10 | B | | 25 | 3.5 | 3 | 0.05 | | ZNO |
| 1994 12 03.86 | | B | 8.9 | AC | 30.5 | L | 5 | 48 | 10.0 | 7 | 0.5 | 270 | VIC |
| 1994 12 03.95 | | S | 9.0 | S | 8.0 | B | | 20 | 4.8 | 2 | | | SPE01 |
| 1994 12 03.95 | | S | 9.0: | S | 6.7 | B | | 20 | & 5 | 4 | | | SCI |
| 1994 12 03.98 | | S | 8.5 | AC | 6.0 | B | | 20 | 8 | 5 | | | CSU |
| 1994 12 04.00 | | B | 9.2 | S | 6.6 | B | | 20 | &11 | 5 | | | FIL04 |
| 1994 12 04.03 | | S | 8.1 | AC | 25.4 | J | 6 | 47 | 5 | 4/ | 0.20 | 105 | BOU |
| 1994 12 04.11 | | S | 8.7: | AA | 11 | L | 7 | 32 | 6 | 3 | | | BAR06 |
| 1994 12 04.21 | | S | 8.0: | AA | 20.0 | T | 10 | 50 | | 6 | | | SHA04 |
| 1994 12 04.28 | | S | 8.7 | S | 20.0 | T | 10 | 63 | 2.2 | 3 | | 290 | PRY |
| 1994 12 04.44 | | S | 7.9 | AC | 5.0 | B | | 10 | 10 | 5/ | | | BOR |
| 1994 12 04.92 | | S | 8.2 | AC | 20.0 | T | 10 | 78 | & 4 | 2 | | | COM |
| 1994 12 05.20 | | S | 8.2 | AA | 20 | T | 10 | 64 | 3.5 | 3/ | | | SPR |
| 1994 12 05.74 | | C | 8.9 | HS | 41.0 | L | 6 | | 2.8 | | | | KOB01 |
| 1994 12 05.90 | | S | 8.1 | AC | 15.2 | L | 5 | 42 | 5.5 | 4 | | | MOE |
| 1994 12 05.94 | | S | 7.8 | S | 6.3 | B | | 9 | 7 | 3/ | | | KAM01 |
| 1994 12 06.20 | | S | 8.6 | AC | 8.0 | B | | 15 | 8 | 7 | | | SCH04 |
| 1994 12 06.84 | | M | 8.7 | TI | 20 | L | 5 | 48 | 5 | 3/ | 0.06 | 280 | HOR02 |
| 1994 12 06.86 | | S | 8.0 | AC | 15.2 | L | 5 | 42 | 6.0 | 4 | | | MOE |
| 1994 12 06.91 | | S | 8.1 | AC | 20.0 | L | 4 | 42 | 7 | 5/ | | | SCH04 |
| 1994 12 06.92 | | M | 9.2 | S | 15 | L | 5 | 44 | 4.8 | 4 | | | SPE01 |
| 1994 12 06.92 | | S | 8.4 | AC | 8.0 | B | | 15 | 6 | 7 | | | SCH04 |
| 1994 12 06.93 | | S | 7.9 | S | 6.3 | B | | 9 | 7 | 2/ | | | KAM01 |
| 1994 12 06.93 | | S | 9.1 | S | 6.7 | B | | 20 | & 6 | 3 | | | SCI |
| 1994 12 06.94 | | M | 8.2 | AC | 20.0 | T | 10 | 78 | & 4 | 2/ | | | COM |
| 1994 12 07.00 | | B | 8.7 | S | 11.0 | B | | 20 | & 8 | 4/ | | | PLE01 |
| 1994 12 07.94 | | S | 8.1 | AC | 20.0 | L | 4 | 42 | 6 | 6/ | | | SCH04 |
| 1994 12 07.97 | | S | 9.2 | S | 6.7 | B | | 20 | & 5 | 3 | | | SCI |
| 1994 12 08.01 | | S | 8.5 | AA | 20 | R | 14 | 40 | 3 | 4 | | | LAN03 |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 08.03 | | B | 8.7 | S | 11.0 | B | | 20 | & 9 | 4 | | | PLE01 |
| 1994 12 08.07 | | M | 8.2 | AC | 20.0 | T | 10 | 78 | & 5 | 3 | | | COM |
| 1994 12 08.90 | | M | 9.0 | NP | 30 | L | 5 | 40 | 8 | | | | POP |
| 1994 12 08.92 | | S | 9.2: | S | 6.7 | B | | 20 | & 5 | 3 | | | SCI |
| 1994 12 09.00 | | S | 8.8 | AA | 20 | R | 14 | 40 | 4.0 | 4 | 0.06 | 110 | SHA02 |
| 1994 12 09.01 | | B | 8.8 | S | 11.0 | B | | 20 | &11 | 4 | | | PLE01 |
| 1994 12 09.09 | | S | 8.6 | AA | 20 | R | 14 | 40 | 4 | 4 | 0.17 | 260 | LAN03 |
| 1994 12 09.97 | | S | 9.3 | S | 6.7 | B | | 20 | & 7 | 3 | | | SCI |
| 1994 12 09.98 | | S | 8.1 | AC | 20.0 | L | 4 | 42 | 6 | 5 | &0.2 | 270 | SCH04 |
| 1994 12 09.98 | | S | 8.4 | S | 6.6 | B | | 20 | &10 | 4 | | | FIL04 |
| 1994 12 09.99 | | S | 8.3 | AC | 20.0 | T | 10 | 78 | & 4 | 2/ | | | COM |
| 1994 12 10.01 | | S | 8.3 | AC | 8.0 | B | | 15 | 8 | 6/ | | | SCH04 |
| 1994 12 10.04 | | E | 9.8 | NP | 25 | L | 4 | 40 | 4.5 | 4 | 0.5 | 280 | NEV |
| 1994 12 10.07 | | B | 8.9 | S | 11.0 | B | | 20 | &10 | 4 | | | PLE01 |
| 1994 12 11.04 | | M | 8.7 | BD | 20.3 | T | 10 | 80 | 3.8 | 4 | | | GRA04 |
| 1994 12 11.04 | | M | 8.8 | S | 20.3 | T | 10 | 80 | 3.8 | 4 | | | GRA04 |
| 1994 12 11.04 | | M | 8.9 | HD | 20.3 | T | 10 | 80 | 3.8 | 4 | | | GRA04 |
| 1994 12 12.02 | | B | 8.7 | S | 11.0 | B | | 20 | & 8 | 4 | | | PLE01 |
| 1994 12 12.23 | | B | 9.3 | S | 20.3 | L | 6 | 40 | 4.5 | 7 | 0.22 | 270 | BIV |
| 1994 12 12.35 | | S | 8.0 | AC | 5.0 | B | | 10 | 6 | 5 | | | BOR |
| 1994 12 13.27 | | S | 8.6 | S | 7.0 | B | | 10 | 7.2 | 3 | | | DEA |
| 1994 12 14.01 | | B | 9.0 | S | 6.6 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 12 14.02 | | S | 9.6 | AC | 11.0 | L | 5 | 44 | 2 | 4 | | | FEI |
| 1994 12 14.18 | | S | 8.2 | AC | 20.0 | T | 10 | 78 | & 4 | 2/ | | | COM |
| 1994 12 14.18 | | S | 8.3 | AC | 20.0 | L | 4 | 42 | & 7 | 5 | 0.4 | 270 | SCH04 |
| 1994 12 14.18 | | S | 8.4 | AC | 8.0 | B | | 15 | & 7 | 6 | | | SCH04 |
| 1994 12 14.25 | | S | 8.8 | AA | 20 | R | 14 | 40 | 4 | 4 | | | LAN03 |
| 1994 12 14.90 | | S | 8.5: | AC | 15.2 | L | 5 | 42 | 4.5 | 4 | | | MOE |
| 1994 12 15.24 | | S | 8.3 | AC | 20.0 | L | 4 | 42 | 8 | 4 | 0.5 | 270 | SCH04 |
| 1994 12 15.24 | | S | 8.4 | AC | 15.2 | L | 5 | 42 | 6.5 | 3 | | | MOE |
| 1994 12 15.25 | | S | 8.6 | AC | 8.0 | B | | 15 | 8 | 3 | | | SCH04 |
| 1994 12 15.91 | | M | 9.5 | TI | 13 | L | 8 | 69 | 2.6 | 3 | | | HOR02 |
| 1994 12 16.10 | | S | 9.3 | AC | 20 | L | 8 | 60 | 4 | 5 | | | CSU |
| 1994 12 16.20 | | S | 9.0 | AC | 15.6 | L | 10 | 54 | 8 | 2 | | | KOS |
| 1994 12 16.70 | | C | 8.9 | HS | 41.0 | L | 6 | | 3.8 | | >0.05 | 275 | KOB01 |
| 1994 12 17.05 | | S | 9.1 | S | 6.6 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 12 20.11 | | S | 9.0 | S | 11.0 | B | | 20 | & 7 | 3/ | | | PLE01 |
| 1994 12 20.73 | | S | 9.1 | AC | 15.6 | L | 10 | 54 | 8 | 2 | | | KOS |
| 1994 12 21.20 | | S | 9.2 | S | 11.0 | B | | 20 | & 7 | 3/ | | | PLE01 |
| 1994 12 21.79 | | M | 8.4 | AC | 25.4 | J | 6 | 47 | 4.5 | 4/ | | | BOU |
| 1994 12 22.08 | | B | 9.5 | AA | 8.0 | B | 4 | 15 | 4 | 1 | | | NOW |
| 1994 12 22.72 | | B | 9.0 | S | 25 | L | 4 | 33 | 6 | 5 | | | KRY01 |
| 1994 12 22.83 | | S | 9.0 | S | 15.0 | R | 5 | 25 | 4 | 3/ | | | NAG02 |
| 1994 12 22.88 | | S | 9.2 | AA | 20 | R | 14 | 40 | 3 | 2 | | | LAN03 |
| 1994 12 23.08 | | B | 9.7 | AA | 20 | L | 6 | 30 | 4 | 4 | | | NOW |
| 1994 12 23.71 | | C | 9.2 | HS | 41.0 | L | 6 | | 4.3 | | >0.10 | 273 | KOB01 |
| 1994 12 23.87 | | M | 8.5 | AA | 25.4 | J | 6 | 47 | 4.5 | 4/ | | | BOU |
| 1994 12 23.87 | | S | 8.7 | AC | 15.2 | L | 5 | 42 | 4.5 | 3 | | | MOE |
| 1994 12 23.99 | | S | 9.3 | S | 6.6 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 12 24.79 | | S | 8.6 | AA | 13.0 | L | 6 | 36 | 5 | 4 | | | MEY |
| 1994 12 24.95 | | M | 10.1 | TI | 13 | L | 8 | 69 | 2.7 | 4 | | | HOR02 |
| 1994 12 25.02 | | B | 9.1 | S | 11.0 | B | | 20 | & 8 | 3/ | | | PLE01 |
| 1994 12 25.90 | | S | 9.6 | AA | 11 | L | 7 | 32 | 4 | 3 | | | BAR06 |
| 1994 12 25.92 | | S | 9.5 | AA | 11 | L | 7 | 40 | 3.5 | 4 | | | BAR06 |
| 1994 12 26.19 | | | | | 40.6 | L | 5 | 70 | 2.3 | 7 | 0.18 | 265 | BOR |
| 1994 12 26.19 | | S | 8.7 | AC | 5.0 | B | | 10 | 6 | | | | BOR |
| 1994 12 26.42 | | S | 9.3 | GA | 20 | L | 8 | 46 | 3 | 5 | | | DID |
| 1994 12 26.83 | | S | 9.1 | S | 15.0 | R | 5 | 25 | 5 | 3 | | | NAG02 |
| 1994 12 27.20 | | S | 8.7 | AA | 20 | T | 10 | 64 | 3.0 | 3/ | | | SPR |
| 1994 12 27.21 | | S | 8.5 | AC | 8.0 | B | | 20 | 6 | 5 | | | BOR |
| 1994 12 27.27 | | M | 8.7 | AA | 8.0 | B | | 20 | 7 | 3 | 0.42 | 270 | MOR |
| 1994 12 27.29 | | | | | 25.6 | L | 4 | 45 | | | 0.17 | 270 | MOR |
| 1994 12 27.29 | | M | 8.7 | AA | 25.6 | L | 4 | 45 | | 6 | 0.08 | 110 | MOR |
| 1994 12 28.27 | | M | 9.9 | GA | 20.0 | L | 5 | 35 | 2.5 | 3/ | | | MOD |
| 1994 12 28.28 | | | | | 35.9 | L | 7 | 85 | 1.2 | 4 | 0.06 | 282 | MOD |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 28.85 | | S | 8.9 | S | 15.0 | R | 5 | 25 | 5 | 3/ | | | NAG02 |
| 1994 12 28.97 | | S | 9.3 | AA | 11 | L | 7 | 40 | & 5 | 4/ | | | BAR06 |
| 1994 12 29.08 | | S | 9.3 | S | 10 | M | 10 | 25 | & 7 | 3 | | | PLE01 |
| 1994 12 29.26 | | S | 8.9 | NP | 5.0 | B | | 10 | | | | | HAL |
| 1994 12 29.86 | | S | 9.1 | S | 15.0 | R | 5 | 25 | 5 | 3 | | | NAG02 |
| 1994 12 29.88 | | S | 9.1 | AC | 15.6 | L | 10 | 54 | 7 | 2 | | | KOS |
| 1994 12 30.04 | | S | 9.2 | AC | 20 | L | 8 | 60 | 3 | 5 | 0.12 | 110 | CSU |
| 1994 12 30.14 | | | | | 40.6 | L | 5 | 70 | 4.6 | 6/ | 0.17 | 265 | BOR |
| 1994 12 30.14 | | S | 8.5 | AC | 8.0 | B | | 20 | 7 | 4/ | | | BOR |
| 1994 12 30.16 | | S | 9.3 | AA | 20 | T | 10 | 64 | 3.0 | 4 | | | SPR |
| 1994 12 30.25 | | M | 8.7 | AA | 8.0 | B | | 20 | 6.5 | 3 | 0.33 | 250 | MOR |
| 1994 12 30.29 | | | | | 25.6 | L | 4 | 67 | | 6 | 0.12 | 110 | MOR |
| 1994 12 30.29 | | | | | 25.6 | L | 4 | 67 | | | 0.25 | 250 | MOR |
| 1994 12 30.91 | | M | 8.7 | AA | 25.4 | J | 6 | 47 | 3.5 | 5 | | | BOU |
| 1994 12 30.91 | | S | 8.7 | AC | 20.0 | T | 10 | 78 | & 5 | 2/ | | | COM |
| 1994 12 31.04 | | B | 9.5 | S | 6.6 | B | | 20 | &10 | 3/ | | | PLE01 |
| 1994 12 31.17 | | M | 10.2 | TI | 10.0 | B | 4 | 25 | 4 | 3 | | | LEH |
| 1994 12 31.17 | | S | 9.2 | AA | 20 | T | 10 | 64 | 3.5 | 4/ | | | SPR |
| 1994 12 31.74 | | M | 10.3 | TI | 10.0 | B | 4 | 25 | 4 | 3 | | | LEH |
| 1994 12 31.76 | | S | 9.1 | AC | 30.5 | L | 5 | 117 | 6.0 | 7 | 0.25 | 270 | VIC |
| 1994 12 31.84 | | S | 9.2 | S | 15.0 | R | 5 | 25 | 4 | 3 | | | NAG02 |
| 1994 12 31.93 | | S | 10.2 | S | 10 | M | 10 | 40 | & 4 | 3/ | | | SCI |
| 1995 01 01.03 | | B | 9.5 | S | 6.6 | B | | 20 | &12 | 3 | | | PLE01 |
| 1995 01 01.03 | | S | 9.1 | AC | 15.2 | L | 5 | 42 | 4.0 | 3 | | | MOE |
| 1995 01 01.05 | | S | 8.4 | AC | 15.0 | R | 15 | 85 | 4.0 | 4 | | | DIE02 |
| 1995 01 01.07 | | S | 8.8 | AC | 20.0 | L | 4 | 42 | 8 | 3 | | | SCH04 |
| 1995 01 01.18 | | S | 9.1 | AA | 20 | T | 10 | 64 | 3.6 | 4/ | | | SPR |
| 1995 01 01.19 | | S | 8.2 | AA | 10.0 | B | | 25 | 3.8 | 3 | | | HAS02 |
| 1995 01 01.45 | ! | S | 9.0: | NP | 5.0 | B | | 10 | | | | | HAL |
| 1995 01 01.78 | | M | 10.3 | TI | 10.0 | B | 4 | 25 | 4 | 2/ | | | LEH |
| 1995 01 01.81 | | M | 10.1 | TI | 35 | L | 5 | 92 | 2.7 | 4/ | 0.04 | | HOR02 |
| 1995 01 01.83 | | S | 8.9 | AC | 20.0 | T | 10 | 78 | & 4 | 2 | | | COM |
| 1995 01 01.85 | | S | 9.0 | AC | 15.2 | L | 5 | 42 | 4.5 | 4 | | | MOE |
| 1995 01 01.87 | | S | 9.1 | S | 15.0 | R | 5 | 25 | 4.5 | 3/ | | | NAG02 |
| 1995 01 01.90 | | M | 8.5 | NP | 5 | R | 3 | 10 | 9 | | | | POP |
| 1995 01 01.94 | | S | 9.4 | S | 10 | M | 10 | 20 | | 3 | | | PAR03 |
| 1995 01 01.98 | | B | 9.4 | S | 6.6 | B | | 20 | & 6 | 4 | | | FIL04 |
| 1995 01 01.98 | | S | 10.0 | S | 10 | M | 10 | 40 | & 5 | 3/ | | | SCI |
| 1995 01 02.01 | | S | 8.5 | S | 6.0 | R | 15 | 22 | 3.6 | 2 | | | GRA04 |
| 1995 01 02.01 | | S | 8.6 | BD | 6.0 | R | 15 | 22 | 3.6 | 2 | | | GRA04 |
| 1995 01 02.01 | | S | 8.8 | HD | 6.0 | R | 15 | 22 | 3.6 | 2 | | | GRA04 |
| 1995 01 02.11 | | S | 8.8 | AC | 6.0 | B | | 20 | 9 | 2/ | | | SAR02 |
| 1995 01 02.12 | | | | | 44.5 | L | 5 | 230 | 1.5 | 6/ | 0.17 | 285 | SAR02 |
| 1995 01 02.13 | | S | 9.2 | AC | 44.5 | L | 5 | 146 | | | 0.20 | | SAR02 |
| 1995 01 02.16 | | S | 9.3 | AA | 20 | T | 10 | 64 | 3.0 | 4/ | | | SPR |
| 1995 01 02.21 | | S | 9.1 | AA | 8.0 | B | | 20 | 6.5 | 2/ | | | MOR |
| 1995 01 02.23 | | | | | 25.6 | L | 4 | 45 | | | 0.33 | 235 | MOR |
| 1995 01 02.23 | | M | 9.1 | AA | 25.6 | L | 4 | 45 | | 4 | 0.10 | 110 | MOR |
| 1995 01 02.59 | | C | 9.9 | HS | 41.0 | L | 6 | | 2.6 | | >0.05 | 269 | KOB01 |
| 1995 01 02.71 | | C | 10.4 | HS | 20.0 | L | 4 | | 2.9 | | | | OOY |
| 1995 01 02.96 | | S | 10.2 | S | 10 | M | 10 | 40 | & 4 | 3/ | | | SCI |
| 1995 01 03.07 | | S | 9.5 | AC | 6.0 | B | | 20 | 5 | 5 | | | CSU |
| 1995 01 03.18 | | S | 9.2 | AA | 20 | T | 10 | 64 | 3.0 | 4 | | | SPR |
| 1995 01 03.73 | | S | 9.1 | AC | 15.2 | L | 5 | 42 | 4.5 | 4 | | | MOE |
| 1995 01 03.77 | | M | 9.1 | TI | 10 | B | | 25 | 3.5 | 3 | 0.05 | | ZNO |
| 1995 01 03.83 | | M | 8.8 | AA | 25.4 | J | 6 | 47 | 3.5 | 4/ | | | BOU |
| 1995 01 03.85 | | S | 9.5 | AC | 30.5 | L | 5 | 117 | 5.0 | 7 | 0.15 | 275 | VIC |
| 1995 01 03.88 | | S | 8.5 | AC | 35 | L | 5 | 49 | 5.0 | 5 | | | BRO04 |
| 1995 01 03.94 | | S | 8.9 | AC | 30.0 | L | 5 | 60 | 6 | 2/ | ? | | SCH04 |
| 1995 01 03.97 | | S | 8.5 | AC | 15.0 | R | 15 | 85 | 4.0 | 4 | | | DIE02 |
| 1995 01 03.99 | | S | 8.9 | AC | 20.0 | T | 10 | 63 | 5 | 1/ | | | COM |
| 1995 01 04.00 | | S | 9.1 | AA | 20 | R | 14 | 40 | 4 | 3 | | | LAN03 |
| 1995 01 04.01 | | S | 9.4 | AC | 15.6 | L | 10 | 54 | 5 | 2 | | | KOS |
| 1995 01 04.19 | | S | 9.1 | AA | 20 | T | 10 | 64 | 3.5 | 4 | | | SPR |
| 1995 01 04.63 | | S | 11.1 | NP | 20.0 | L | 4 | | | 3 | | | OHM |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 04.83 | | E | 10.1 | NP | 25 | L | 4 | 40 | 4.8 | 2 | 0.2 | 270 | NEV |
| 1995 01 04.84 | | M | 8.8 | AA | 25.4 | J | 6 | 47 | 4 | 4/ | | | BOU |
| 1995 01 04.85 | | S | 8.5 | AC | 15.0 | R | 15 | 85 | 4.0 | 4 | | | DIE02 |
| 1995 01 04.85 | | S | 8.8 | AC | 25.4 | J | 6 | 47 | 4 | 4 | | | FEI |
| 1995 01 04.86 | | S | 9.2 | AC | 15.2 | L | 5 | 42 | 4.0 | 3 | | | MOE |
| 1995 01 04.88 | | S | 9.5: | NP | 8.0 | B | 5 | 20 | & 3 | 3 | | | MIL02 |
| 1995 01 04.90 | | S | 8.3 | AC | 35 | L | 5 | 49 | 3.5 | 6 | | | BRO04 |
| 1995 01 04.90 | | S | 9.0 | AC | 20.0 | L | 4 | 42 | 7 | 2/ | ? | | SCH04 |
| 1995 01 04.91 | | S | 8.9 | AC | 20.0 | T | 10 | 63 | & 4 | 2/ | | | COM |
| 1995 01 04.97 | | S | 9.1 | S | 8.0 | B | | 11 | 3 | 3 | | | GAR02 |
| 1995 01 05.05 | | S | 9.4 | GA | 20 | L | 8 | 46 | 3 | 6 | | | DID |
| 1995 01 05.10 | | S | 9.6 | S | 6.6 | B | | 20 | & 8 | 3 | | | PLE01 |
| 1995 01 05.19 | | S | 9.0 | AA | 20 | T | 10 | 64 | 3.5 | 4/ | | | SPR |
| 1995 01 05.67 | | C | 10.9 | HS | 20.0 | L | 4 | | 2.5 | | | | OOY |
| 1995 01 05.83 | | E | 10.2 | NP | 25 | L | 4 | 40 | 4.5 | 2 | 0.2 | 270 | NEV |
| 1995 01 05.88 | | S | 9.1 | GA | 9.0 | M | | 42 | 4 | 3/ | | | KAM01 |
| 1995 01 05.94 | | S | 9.1 | AC | 15.2 | L | 5 | 42 | 4.0 | 3 | | | MOE |
| 1995 01 06.17 | | S | 9.0 | AC | 40.6 | L | 5 | 70 | 2.9 | 6/ | 0.15 | 125 | BOR |
| 1995 01 06.19 | | M | 10.1 | GA | 20.0 | L | 5 | 35 | 2.5 | 3/ | | | MOD |
| 1995 01 06.20 | | S | 9.0 | AA | 20 | T | 10 | 64 | 3.5 | 4/ | | | SPR |
| 1995 01 06.72 | | C | 10.6 | HS | 20.0 | L | 4 | | 2.3 | | | | OOY |
| 1995 01 06.87 | | S | 9.2 | S | 15.0 | R | 5 | 25 | 4 | 3 | | | NAG02 |
| 1995 01 07.06 | | S | 9.3 | AA | 20 | R | 14 | 40 | 4 | 3 | | | LAN03 |
| 1995 01 07.83 | | S | 9.1 | S | 15.0 | R | 5 | 25 | 5 | 2/ | | | NAG02 |
| 1995 01 08.94 | | S | 9.4 | NP | 8.0 | B | 5 | 20 | 5 | 3 | | | MIL02 |
| 1995 01 09.85 | | S | 9.2 | NP | 15.0 | R | 5 | 25 | 4 | 2/ | | | NAG02 |
| 1995 01 10.13 | | S | 9.8 | S | 11.0 | B | | 20 | & 6 | 2/ | | | PLE01 |
| 1995 01 10.71 | | S | 9.2 | AC | 15.2 | L | 5 | 42 | 3.5 | 3 | | | MOE |
| 1995 01 10.77 | | M | 9.0 | TI | 10 | B | | 25 | 3.0 | 3 | | | ZNO |
| 1995 01 10.83 | | S | 9.3 | NP | 15.0 | R | 5 | 25 | 4 | 2/ | | | NAG02 |
| 1995 01 11.11 | | S | 10.0 | S | 11.0 | B | | 20 | & 7 | 3 | | | PLE01 |
| 1995 01 11.14 | | S | 9.0 | AC | 20.0 | T | 10 | 68 | & 4 | 3 | | | COM |
| 1995 01 11.74 | | S | 9.3 | AC | 15.2 | L | 5 | 42 | 3.0 | 3 | | | MOE |
| 1995 01 12.16 | ! | V | 10.2 | YF | 20.0 | T | 2 | | & 6 | 7 | 0.25 | 270 | MIK |
| 1995 01 12.66 | | C | 10.8 | HS | 20.0 | L | 4 | | 2.1 | | | | OOY |
| 1995 01 13.21 | | S | 9.3 | AC | 25.4 | J | 6 | 47 | 3.6 | 3 | | | BOU |
| 1995 01 13.83 | | S | 9.5 | NP | 15.0 | R | 5 | 25 | 4.5 | 2 | | | NAG02 |
| 1995 01 14.16 | | S | 9.6 | AA | 20.0 | T | 10 | 64 | 3.0 | 3/ | | | SPR |
| 1995 01 14.85 | | S | 9.6 | NP | 15.0 | R | 5 | 25 | 4 | 2/ | | | NAG02 |
| 1995 01 15.71 | | C | 11.1 | HS | 20.0 | L | 4 | | 1.7 | | | | OOY |
| 1995 01 16.14 | | S | 10.1 | S | 11.0 | B | | 20 | & 8 | 2/ | | | PLE01 |
| 1995 01 16.74 | | M | 9.3 | TI | 10 | B | | 25 | 2.5 | 3 | | | ZNO |
| 1995 01 16.77 | | S | 10.4 | TI | 35 | L | 5 | 92 | 3 | 2 | | | HOR02 |
| 1995 01 17.66 | | C | 10.7 | HS | 20.0 | L | 4 | | 2.9 | | | | OOY |
| 1995 01 18.67 | | M | 10.2 | NP | 30 | L | 5 | 100 | 5.5 | 9 | | | POP |
| 1995 01 19.73 | | E | 11.4 | NP | 25 | L | 4 | 40 | 4 | 0 | | | NEV |
| 1995 01 19.74 | | S | 9.3 | AA | 10.0 | B | | 25 | 3.0 | 3 | | | HAS02 |
| 1995 01 20.15 | | S | 9.8 | AA | 20.0 | T | 10 | 64 | 3.0 | 3/ | | | SPR |
| 1995 01 20.75 | | E | 11.4 | NP | 25 | L | 4 | 40 | 4 | 0 | | | NEV |
| 1995 01 20.76 | | S | 9.4 | AC | 20.0 | T | 10 | 77 | & 3 | 2 | | | COM |
| 1995 01 20.80 | | S | 9.5 | AC | 25.4 | J | 6 | 47 | 3.4 | 2 | | | BOU |
| 1995 01 20.88 | | S | 10.1 | TB | 30.0 | L | 5 | 60 | & 3 | 1 | | | SCH04 |
| 1995 01 21.17 | | S | 9.8 | AA | 20.0 | T | 10 | 64 | 3.5 | 3 | | | SPR |
| 1995 01 22.16 | | S | 10.0 | AA | 20.0 | T | 10 | 64 | 4.0 | 2/ | | | SPR |
| 1995 01 22.18 | | S | 10.4 | S | 11.0 | B | | 20 | & 6 | 2/ | | | PLE01 |
| 1995 01 23.12 | | S | 10.0 | AA | 20.0 | T | 10 | 78 | 3.0 | 2 | | | SPR |
| 1995 01 23.12 | | S | 10.4 | S | 11.0 | B | | 20 | & 6 | 2/ | | | PLE01 |
| 1995 01 23.15 | | S | 9.8 | AA | 20 | R | 14 | 40 | 3 | 2 | 0.33 | 110 | LAN03 |
| 1995 01 23.81 | | S | 9.7: | AC | 15.2 | L | 5 | 42 | 3.0 | 3 | | | MOE |
| 1995 01 24.15 | | S | 10.1 | AA | 20.0 | T | 10 | 78 | 3.0 | 2/ | | | SPR |
| 1995 01 24.46 | | S | 10.0 | NP | 20 | L | 6 | 49 | | | | | HAL |
| 1995 01 24.85 | | S | 10.4 | AC | 15.6 | L | 10 | 54 | 4 | 2 | | | KOS |
| 1995 01 24.93 | | S | 10.0 | AC | 20 | L | 8 | 60 | 3 | 3 | | | CSU |
| 1995 01 25.12 | | S | 10.3 | AA | 20.0 | T | 10 | 78 | 3.0 | 2 | | | SPR |
| 1995 01 26.19 | | S | 10.2 | AA | 20.0 | T | 10 | 78 | 2.5 | 2/ | | | SPR |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 26.73 | | C | 10.7 | HS | 20.0 | L | 4 | | 1.5 | | | | OOY |
| 1995 01 26.86 | | S | 10.0 | AA | 20 | R | 14 | 40 | 4 | 2 | | | LANO3 |
| 1995 01 26.93 | | S | 9.6 | AC | 20.0 | T | 10 | 78 | & 2 | 2 | | | COM |
| 1995 01 26.98 | | S | 9.8 | AC | 25.4 | J | 6 | 47 | 3.2 | 2 | | | BOU |
| 1995 01 27.05 | | S | 9.9 | NP | 40.6 | L | 5 | 70 | 2.2 | 4 | 0.1 | 245 | BOR |
| 1995 01 27.27 | | M | 11.7 | GA | 35.9 | L | 7 | 85 | 1.0 | 3 | | | MOD |
| 1995 01 27.31 | | M | 11.1 | GA | 20.0 | L | 5 | 35 | 2.0 | 2 | | | MOD |
| 1995 01 27.64 | | C | 11.7 | HS | 20.0 | L | 4 | | 1.1 | | | | OOY |
| 1995 01 27.76 | | S | 10.2 | AC | 10.0 | B | | 25 | | | | | HASO2 |
| 1995 01 27.89 | | S | 9.7 | NP | 8.0 | B | 5 | 20 | 3 | 2/ | | | MILO2 |
| 1995 01 27.94 | | S | 9.8 | NP | 8.0 | B | 5 | 20 | | 3 | | | TOMO1 |
| 1995 01 28.00 | | M | 9.9 | TI | 35 | L | 5 | 92 | 3.4 | 3 | | | HORO2 |
| 1995 01 28.05 | | S | 10.1 | NP | 40.6 | L | 5 | 70 | 2.2 | 4 | 0.07 | 115 | BOR |
| 1995 01 28.59 | | C | 11.7 | HS | 20.0 | L | 4 | | 1.1 | | | | OOY |
| 1995 01 28.91 | | M | 10.1 | TI | 35 | L | 5 | 92 | 3 | 3 | | | HORO2 |
| 1995 01 29.00 | | S | 10.0 | AC | 25.4 | J | 6 | 47 | 3.0 | 1/ | | | BOU |
| 1995 01 29.07 | | S | 9.8 | NP | 8.0 | B | 5 | 20 | 3 | 2 | | | MILO2 |
| 1995 01 29.11 | | M | 11.2 | GA | 20.0 | L | 5 | 35 | 1.9 | 2 | | | MOD |
| 1995 01 29.14 | | S | 10.7 | S | 11.0 | B | | 20 | & 6 | 2/ | | | PLEO1 |
| 1995 01 29.20 | | M | 10.4 | NP | 41 | L | 4 | 72 | | | | | HAL |
| 1995 01 29.61 | | C | 11.6 | HS | 20.0 | L | 4 | | 1.3 | | | | OOY |
| 1995 01 29.82 | | S | 10.8 | AC | 15.6 | L | 10 | 54 | 3 | 1 | | | KOS |
| 1995 01 29.93 | | S | 10.7 | GA | 11 | L | 7 | 40 | 2 | 2/ | 0.05 | 280 | BARO6 |
| 1995 01 30.10 | | S | 10.5 | AA | 20.0 | T | 10 | 78 | 2.0 | 2 | | | SPR |
| 1995 01 30.24 | | M | 10.1 | NP | 25.6 | L | 4 | 67 | 2.5 | 3 | | | MOR |
| 1995 01 30.84 | | S | 9.8 | AC | 15.2 | L | 5 | 42 | 2.5 | 2 | | | MOE |
| 1995 01 30.86 | | S | 10.2 | AS | 25.4 | J | 6 | 58 | 2.7 | 1/ | | | BOU |
| 1995 01 30.95 | | S | 10.2 | AC | 20.0 | T | 10 | 78 | 3 | 1/ | | | COM |
| 1995 01 30.95 | | S | 10.8 | AC | 20.0 | L | 4 | 80 | & 2 | 2 | | | SCHO4 |
| 1995 01 31.07 | | S | 10.4 | NP | 40.6 | L | 5 | 70 | 1.8 | 3 | 0.12 | 250 | BOR |
| 1995 01 31.73 | | M | 10.1 | TI | 10 | B | | 25 | 2.5 | 3 | | | ZNO |
| 1995 01 31.73 | | S | 10.9 | AC | 15.6 | L | 10 | 54 | 3 | 1 | | | KOS |
| 1995 01 31.89 | | M | 10.3 | TI | 20 | L | 5 | 48 | 2.4 | 3/ | | | HORO2 |
| 1995 01 31.90 | | M | 11.0 | TI | 20 | R | 17 | 87 | 1.6 | 3 | | 219 | LEH |
| 1995 01 31.95 | | E | 11.9 | NP | 25 | L | 4 | 66 | 1.7 | 0 | | | NEV |
| 1995 02 01.03 | | S | 11.8 | AC | 20 | L | 8 | 60 | 1.5 | 2 | | | CSU |
| 1995 02 01.19 | | M | 10.3 | NP | 25.6 | L | 4 | 67 | 2.5 | 2/ | | | MOR |
| 1995 02 01.73 | | S | 10.6: | GA | 11 | L | 7 | 40 | & 3 | 3 | | | BARO6 |
| 1995 02 01.80 | | S | 10.5 | AC | 20.3 | T | 10 | 51 | 1.5 | 3 | | | HASO2 |
| 1995 02 02.79 | | S | 10.4 | AC | 15.2 | L | 5 | 42 | 2.0 | 1 | | | MOE |
| 1995 02 02.86 | | M | 10.2 | TI | 20 | L | 5 | 48 | 3.5 | 3/ | | | HORO2 |
| 1995 02 02.88 | | M | 10.8 | TI | 20 | L | 5 | 48 | 2.3 | | | | PLS |
| 1995 02 03.08 | | S | 10.3 | NP | 40.6 | L | 5 | 70 | 2.8 | 3 | ? | 235 | BOR |
| 1995 02 03.15 | | M | 11.4 | GA | 20.0 | L | 5 | 35 | 1.6 | 2/ | | | MOD |
| 1995 02 03.15 | | S | 10.4 | NP | 20 | L | 6 | 49 | | | | | HAL |
| 1995 02 03.64 | | C | 12.2 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 02 03.67 | | C | 12.3 | HS | 25.4 | T | 6 | | 0.9 | | | | YOS |
| 1995 02 03.83 | | E | 12.0 | NP | 25 | L | 4 | 66 | 1.5 | 0 | | | NEV |
| 1995 02 03.87 | | S | 10.9 | GA | 11 | L | 7 | 40 | 3 | 4/ | 0.05 | 270 | BARO6 |
| 1995 02 03.87 | | S | 11.2 | AC | 30.5 | L | 5 | 117 | 3.0 | 3 | | | VIC |
| 1995 02 03.90 | | S | 10.9 | S | 11.0 | B | | 20 | &10 | 2/ | | | PLEO1 |
| 1995 02 04.26 | | S | 10.5: | NP | 25.6 | L | 4 | 67 | 3.8 | 2 | | | MOR |
| 1995 02 04.85 | | S | 10.6 | AC | 15.2 | L | 5 | 42 | 2.0 | 1 | | | MOE |
| 1995 02 04.95 | | S | 10.5 | AS | 25.4 | J | 6 | 58 | 2.6 | 1/ | | | BOU |
| 1995 02 05.33 | | M | 10.5 | NP | 25.6 | L | 4 | 67 | 2.5 | 3 | | | MOR |
| 1995 02 05.37 | | M | 10.6 | NP | 41 | L | 4 | 72 | | | | | HAL |
| 1995 02 06.71 | | C | 12.3 | HS | 20.0 | L | 4 | | 0.7 | | | | OOY |
| 1995 02 07.19 | | J | 11.4: | SC | 25 | T | 6 | | 0.35 | 9 | | | ROQ |
| 1995 02 07.72 | | M | 10.5 | TI | 10 | B | | 25 | 2.3 | 3 | | | ZNO |
| 1995 02 07.84 | | M | 9.7: | TI | 20 | L | 5 | 48 | 2.5 | 3 | | | HORO2 |
| 1995 02 08.10 | | S | 10.7 | AA | 20.0 | T | 10 | 78 | 2.0 | 2/ | | | SPR |
| 1995 02 08.76 | | S | 11.1: | AC | 15.2 | L | 5 | 76 | 1.5 | 1 | | | MOE |
| 1995 02 10.48 | | M | 10.8 | NP | 25.6 | L | 4 | 67 | 3.8 | 2 | | | MOR |
| 1995 02 13.12 | | B | 11.4 | HS | 25 | L | 4 | 58 | 2 | 3 | | | KRYO1 |
| 1995 02 17.64 | | C | 12.5 | HS | 20.0 | L | 4 | | 0.9 | | | | OOY |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 02 18.70 | | B | 11.7 | HS | 25 | L | 4 | 58 | 3 | 3 | | | KRY01 |
| 1995 02 18.83 | | S | 11.0 | AS | 25.4 | J | 6 | 58 | 2.6 | 1 | | | BOU |
| 1995 02 19.05 | a | S | 10.9 | NP | 40.6 | L | 5 | 70 | 1.8 | 3 | | | BOR |
| 1995 02 19.16 | | S | 11.2 | NP | 25.6 | L | 4 | 67 | 3.8 | 1/ | | | MOR |
| 1995 02 19.70 | | S | 11.5 | HS | 25 | L | 4 | 58 | 3 | 3 | | | KRY01 |
| 1995 02 19.88 | | S | 12.2 | AC | 30.5 | L | 5 | 117 | 1.5 | 8 | | | VIC |
| 1995 02 21.13 | | S | 11.4 | NP | 25.6 | L | 4 | 111 | 2.6 | 1/ | | | MOR |
| 1995 02 21.64 | | C | 11.6 | GA | 60.0 | Y | 6 | | 3.2 | | > 5.4m | 230 | NAK01 |
| 1995 02 21.66 | | C | 12.4 | HS | 20.0 | L | 4 | | 0.9 | | | | OOY |
| 1995 02 21.85 | | S | 11.2 | AC | 25.4 | J | 6 | 58 | 2.4 | 1 | | | BOU |
| 1995 02 21.87 | | S | 11.3 | AC | 20.0 | L | 4 | 80 | & 3 | 0 | | | SCH04 |
| 1995 02 21.88 | | S | 11.2 | AC | 20.0 | T | 10 | 78 | & 2 | 0/ | | | COM |
| 1995 02 22.78 | | S | 11.5: | AC | 15.2 | L | 5 | 76 | 1.0 | 1 | | | MOE |
| 1995 02 22.79 | | S | 11.7 | HS | 25 | L | 4 | 58 | 3 | 3 | | | KRY01 |
| 1995 02 22.83 | | S | 10.6 | TI | 11 | L | 8 | 32 | 1.8 | 3 | | | KYS |
| 1995 02 22.86 | | M | 11.4 | TI | 20 | R | 17 | 140 | 1.5 | 2 | | | LEH |
| 1995 02 22.94 | | S | 10.8 | GA | 11 | L | 7 | 40 | 3 | 4 | | | BAR06 |
| 1995 02 23.17 | | S | 11.5 | NP | 25.6 | L | 4 | 111 | 2.6 | 2 | | | MOR |
| 1995 02 23.72 | | S | 11.3 | GA | 11 | L | 7 | 40 | 2 | 2 | | | BAR06 |
| 1995 02 23.78 | | S | 11.7 | AC | 15.2 | L | 5 | 76 | 1.0 | 1 | | | MOE |
| 1995 02 23.85 | | S | 11.3 | AC | 25.4 | J | 6 | 58 | 2.4 | 1 | | | BOU |
| 1995 02 23.86 | | S | 11.3 | HS | 25 | L | 4 | 58 | 3 | 4 | | | KRY01 |
| 1995 02 24.16 | | S | 11.6 | NP | 20 | L | 6 | 49 | | | | | HAL |
| 1995 02 24.94 | | S | 11.3 | AC | 20.0 | T | 10 | 78 | & 2 | 0/ | | | COM |
| 1995 02 24.96 | | S | 11.3 | AC | 25.4 | J | 6 | 72 | 2.3 | 1 | | | BOU |
| 1995 02 26.13 | | S | 11.9 | AA | 20.0 | T | 10 | 226 | 2.0 | 2 | | | SPR |
| 1995 02 27.14 | | S | 11.9 | AA | 20.0 | T | 10 | 185 | 2.0 | 2 | | | SPR |
| 1995 02 27.66 | | C | 12.8 | HS | 20.0 | L | 4 | | 0.9 | | | | OOY |
| 1995 02 27.76 | | S | 11.7 | TI | 10 | B | | 25 | 1.5 | 3 | | | ZNO |
| 1995 02 27.82 | | M | 11.6 | TI | 20 | R | 17 | 140 | 1.5 | 2 | | | LEH |
| 1995 02 27.92 | | S | 11.9 | AC | 33.4 | L | 5 | 61 | 4 | 6 | | | SZE02 |
| 1995 02 28.84 | | S | 11.5 | HS | 44.5 | L | 5 | 63 | 1.4 | 2 | | | HAS02 |
| 1995 02 28.84 | | S | 11.5 | HS | 44.5 | L | 5 | 63 | 1.4 | 2 | | | HAS02 |
| 1995 03 01.00 | | S | 12.2 | AC | 40 | Y | 8 | 107 | 2 | 2 | | | DAM |
| 1995 03 01.00 | | S | 12.2 | AC | 40 | Y | 8 | 107 | 2 | 2 | | | FOG |
| 1995 03 01.77 | | S | 11.9 | TI | 10 | B | | 25 | 1.5 | 3 | | | ZNO |
| 1995 03 01.82 | | M | 11.3 | TI | 20 | L | 5 | 48 | 1.6 | | | | PLS |
| 1995 03 01.84 | | S | 11.6 | AC | 25.4 | J | 6 | 58 | 2.3 | 1 | | | BOU |
| 1995 03 01.86 | | M | 11.3 | TI | 35 | L | 5 | 92 | 1.9 | 2/ | | | HOR02 |
| 1995 03 01.93 | | S | 11.5: | AC | 20.0 | T | 10 | 78 | > 2 | 0 | | | COM |
| 1995 03 01.94 | | S | 11.7 | AC | 30.0 | L | 5 | 92 | 2 | 0/ | | | SCH04 |
| 1995 03 02.76 | | S | 11.6 | HS | 25 | L | 4 | 33 | 4 | 3 | | | KRY01 |
| 1995 03 02.79 | | S | 11.6: | AC | 20.0 | T | 10 | 78 | > 2 | 0 | | | COM |
| 1995 03 02.80 | | S | 11.5 | AS | 25.4 | J | 6 | 58 | 2.4 | 1 | | | BOU |
| 1995 03 03.11 | a | S | 11.3 | NP | 40.6 | L | 5 | 70 | 1.6 | 1/ | | | BOR |
| 1995 03 03.81 | | S | 11.7 | TI | 11 | L | 8 | 54 | 1.5 | 2 | | | KYS |
| 1995 03 03.86 | | S | 11.9 | HS | 25 | L | 4 | 58 | 3 | 3 | | | KRY01 |
| 1995 03 04.17 | | B | 11.9 | HS | 20.3 | L | 6 | 79 | 3.0 | 7 | | | BIV |
| 1995 03 04.29 | | M | 13.0 | GA | 35.9 | L | 7 | 85 | 0.7 | 2/ | | | MOD |
| 1995 03 04.91 | | S | 11.6 | AS | 25.4 | J | 6 | 58 | 2.1 | 1 | | | BOU |
| 1995 03 05.18 | | S | 12.4: | WA | 41 | L | 4 | 183 | | | | | HAL |
| 1995 03 05.96 | | S | 11.6 | HS | 25 | L | 4 | 33 | 3 | 3 | | | KRY01 |
| 1995 03 06.14 | | B | 12.1 | HS | 20.3 | L | 6 | 79 | 3.0 | 6 | | | BIV |
| 1995 03 06.63 | | C | 12.8 | HS | 20.0 | L | 4 | | 1.1 | | | | OOY |
| 1995 03 07.35 | | S | 11.6 | NP | 25.6 | L | 4 | 111 | 2.8 | 1/ | | | MOR |
| 1995 03 07.84 | | M | 11.7: | TI | 20 | L | 5 | 125 | 1.3 | | | | PLS |
| 1995 03 08.01 | ! | V | 12.5 | YF | 20.0 | T | 2 | | & 3 | 6 | | | MIK |
| 1995 03 08.71 | | C | 11.7 | GA | 60.0 | Y | 6 | | 3.3 | | > 4.0m | 225 | NAK01 |
| 1995 03 08.75 | | S | 12.4 | HS | 15 | R | 13 | 80 | 1.2 | 2/ | | | ZNO |
| 1995 03 08.83 | | M | 12.2: | HS | 35 | L | 5 | 207 | 0.7 | 3 | | | HOR02 |
| 1995 03 08.84 | | M | 12.4 | HS | 35 | L | 5 | 207 | 0.7 | | | | PLS |
| 1995 03 10.15 | | S | 11.8: | AC | 28.0 | T | 10 | 93 | | 0 | | | COM |
| 1995 03 10.36 | | M | 13.8 | GA | 35.9 | L | 7 | 164 | 0.45 | 3/ | | | MOD |
| 1995 03 10.36 | | S | 13.6 | GA | 35.9 | L | 7 | 85 | 0.55 | 1 | | | MOD |
| 1995 03 10.36 | | S | 13.7 | GA | 35.9 | L | 7 | 164 | | | | | MOD |

Comet 19P/Borrelly [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 03 10.58 | | C | 12.9 | HS | 20.0 | L | 4 | | | 1.3 | | | | OOY |
| 1995 03 10.90 | | M | 12.3 | HS | 35 | L | 5 | 104 | | 0.9 | 2 | | | HORO2 |
| 1995 03 11.15 | | S | 11.9 | AS | 25.4 | J | 6 | 72 | | 1.8 | 0/ | | | BOU |
| 1995 03 11.83 | | M | 12.4 | HS | 35 | L | 5 | 207 | | 0.9 | 2 | | | HORO2 |
| 1995 03 11.89 | | M | 12.6 | HS | 35 | L | 5 | 207 | | 0.8 | | | | PLS |
| 1995 03 12.17 | | S | 11.6 | AC | 20.0 | T | 10 | 78 | & | 2 | 0 | | | COM |
| 1995 03 12.82 | | O[ | 12.3 | HS | 35 | L | 5 | 104 | & | 0.9 | | | | HORO2 |
| 1995 03 13.17 | | S | 12.0 | AS | 25.4 | J | 6 | 88 | | 1.7 | 1 | | | BOU |
| 1995 03 18.80 | | M | 12.5 | HS | 35 | L | 5 | 92 | | 1.6 | 2 | | | HORO2 |
| 1995 03 18.81 | | M | 12.5 | HS | 35 | L | 5 | 92 | | 1.3 | | | | PLS |
| 1995 03 19.06 | a | S | 12.2 | NP | 40.6 | L | 5 | 70 | | 1.2 | 3 | | | BOR |
| 1995 03 20.80 | | M | 13.7: | HS | 35 | L | 5 | 104 | | 1.1 | | | | PLS |
| 1995 03 20.81 | | M | 13.4 | HS | 35 | L | 5 | 104 | | 1.1 | 2 | | | HORO2 |
| 1995 03 21.95 | | S | 12.3: | AC | 28.0 | T | 10 | 112 | | | 0 | | | COM |
| 1995 03 22.87 | | S | 12.3: | AC | 28.0 | T | 10 | 112 | & | 2 | 0 | | | COM |
| 1995 03 22.91 | | S | 12.4 | AS | 25.4 | J | 6 | 88 | | 1.8 | 0 | | | BOU |
| 1995 03 23.83 | | S | 12.8 | HS | 44.5 | L | 5 | 156 | | 0.6 | 4 | | | HASO2 |
| 1995 03 23.93 | | S | 12.7: | AC | 30.0 | T | 5 | 92 | | 2 | 0 | | | SCHO4 |
| 1995 03 23.95 | | S | 12.4 | AC | 28.0 | T | 10 | 112 | & | 2 | 0 | | | COM |
| 1995 03 24.88 | | S | 12.9 | AC | 44.5 | L | 5 | 230 | | 1 | 1/ | | | SARO2 |
| 1995 03 24.99 | | M | 13.1 | HS | 35 | L | 5 | 207 | | 1.6 | 3 | | | HORO2 |
| 1995 03 26.26 | | S | 12.0 | NP | 25.6 | L | 4 | 111 | | 2.5 | 2 | | | MOR |
| 1995 03 27.10 | a | S | 12.4 | NP | 40.6 | L | 5 | 91 | | 1.8 | 1 | | | BOR |
| 1995 03 27.83 | | S | 12.5 | AC | 28.0 | T | 10 | 88 | & | 2 | 0/ | | | COM |
| 1995 03 28.07 | a | S | 12.2 | NP | 40.6 | L | 5 | 91 | | 1.6 | 2/ | | | BOR |
| 1995 03 28.25 | | S | 12.1 | NP | 25.6 | L | 4 | 111 | | 2.3 | 1/ | | | MOR |
| 1995 03 28.81 | | S | 13.7 | HS | 15 | R | 13 | 80 | | 0.8 | 3 | | | ZNO |
| 1995 03 28.81 | ! | V | 12.9 | YF | 20.0 | T | 2 | | & | 4 | 7 | | | MIK |
| 1995 03 28.83 | | M | 13.6 | HS | 35 | L | 5 | 104 | | 1.2 | 2/ | | | HORO2 |
| 1995 03 29.84 | | S | 12.6 | AC | 28.0 | T | 10 | 112 | & | 2 | 0 | | | COM |
| 1995 03 29.85 | | S | 12.7 | AC | 25.4 | J | 6 | 115 | | 1.4 | 1 | | | BOU |
| 1995 03 30.84 | | M | 13.6 | HS | 35 | L | 5 | 104 | | 1 | 3 | | | HORO2 |
| 1995 03 31.83 | | S | 12.8 | AC | 25.4 | J | 6 | 88 | | 1.6 | 0/ | | | BOU |
| 1995 04 02.84 | | S | 13.1 | HS | 44.5 | L | 5 | 230 | | 1 | 1 | | | SARO2 |
| 1995 04 02.84 | | S | 13.4 | HS | 44.5 | L | 5 | 230 | | 1 | 2/ | | | BAKO1 |
| 1995 04 02.87 | | S | 13.0 | AC | 25.4 | J | 6 | 88 | | 1.5 | 0/ | | | BOU |
| 1995 04 03.10 | a | S | 12.4 | NP | 40.6 | L | 5 | 91 | | 1.5 | 0/ | | | BOR |
| 1995 04 03.48 | | C | 12.8 | GA | 60.0 | Y | 6 | | | 2.5 | | | | NAKO1 |
| 1995 04 03.82 | | M | 13.9 | HS | 35 | L | 5 | 207 | | 0.7 | 3 | | | HORO2 |
| 1995 04 03.83 | | M | 13.8 | HS | 35 | L | 5 | 207 | | 0.7 | 2/ | | | PLS |
| 1995 04 03.89 | | S | 12.9 | AC | 25.4 | J | 6 | 88 | | 1.3 | 1 | | | BOU |
| 1995 04 04.23 | | S | 12.4 | NP | 25.6 | L | 4 | 111 | | 1.9 | 1 | | | MOR |
| 1995 04 04.94 | | S | 13.0 | AC | 25.4 | J | 6 | 72 | | 1.3 | 0/ | | | BOU |
| 1995 04 18.91 | | S | 13.4 | AC | 25.4 | J | 6 | 115 | | 1.2 | 0/ | | | BOU |
| 1995 04 26.54 | | C | 13.4 | GA | 60.0 | Y | 6 | | | 2.1 | | | | NAKO1 |
| 1995 04 26.63 | | C | 13.7 | HS | 25.4 | T | 6 | | | 1.4 | | | | YOS |

Comet 29P/Schwassmann-Wachmann 1

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 02.83 | | C | 14.6 | HS | 60.0 | Y | 6 | | | 0.55 | 8/ | | | NAKO1 |
| 1994 10 09.46 | | S[ | 13.2 | AC | 41 | L | 4 | 183 | | 1 | | | | HAL |
| 1994 10 11.43 | | S[ | 13.5 | AC | 41 | L | 4 | 183 | | 1 | | | | HAL |
| 1994 10 14.81 | | C | 14.8 | GA | 60.0 | Y | 6 | | | 1.2 | 3 | | | NAKO1 |
| 1994 10 15.79 | | p | 15.5: | | 16.0 | W | 4 | | | 0.8 | 1 | | | TSUO2 |
| 1994 11 06.46 | | I[ | 13.5: | | 41 | L | 4 | 183 | | | | | | HAL |
| 1994 11 30.97 | | O[ | 13.2 | HS | 35 | L | 5 | 92 | & | 1 | | | | HORO2 |
| 1994 12 03.37 | | S[ | 13.6 | AC | 41 | L | 4 | 183 | | 1 | | | | HAL |
| 1994 12 27.67 | | C | 13.7 | GA | 60.0 | Y | 6 | | | 2.1 | | | | NAKO1 |
| 1994 12 28.30 | | S | 14.5 | GA | 35.9 | L | 7 | 164 | | 0.35 | 4 | | | MOD |
| 1994 12 28.74 | | C | 13.9 | HS | 41.0 | L | 6 | | | 0.62 | | | | KOBO1 |
| 1995 01 01.90 | | M | 13.9 | HS | 35 | L | 5 | 207 | | 0.6 | 2 | | | HORO2 |
| 1995 01 02.72 | | C | 14.4 | HS | 20.0 | L | 4 | | | 0.7 | 5 | | | OOY |
| 1995 01 04.99 | | S[ | 13.5 | AC | 20.3 | T | 10 | 167 | ! | 0.5 | | | | GARO2 |
| 1995 01 06.24 | | S[ | 14.4 | GA | 35.9 | L | 7 | 164 | ! | 0.5 | | | | MOD |

Comet 29P/Schwassmann-Wachmann 1 [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 06.77 | | C | 14.4 | HS | 20.0 | L | 4 | | | 0.7 | | | | OOY |
| 1995 01 12.17 | ! | V | 13.5 | YF | 20.0 | T | 2 | | | 1.5 | 5 | | | MIK |
| 1995 01 12.70 | | C | 15.0 | HS | 20.0 | L | 4 | | | 0.7 | | | | OOY |
| 1995 01 13.18 | ! | V | 13.6 | YF | 20.0 | T | 2 | | | 1.5 | 5 | | | MIK |
| 1995 01 15.72 | | C | 14.7 | HS | 20.0 | L | 4 | | | 0.7 | | | | OOY |
| 1995 01 26.75 | | C | 15.0 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 01 27.66 | | C | 15.0 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 01 27.95 | | O[ | 14.6 | HS | 35 | L | 5 | 207 | & | 0.8 | | | | HOR02 |
| 1995 01 29.22 | | I[ | 13.0: | | 41 | L | 4 | 183 | | | | | | HAL |
| 1995 01 29.30 | | S[ | 14.4 | GA | 35.9 | L | 7 | 164 | ! | 0.5 | | | | MOD |
| 1995 01 29.68 | | C | 14.4 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 01 30.65 | | C | 15.0 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 01 31.95 | | O[ | 13.7 | HS | 35 | L | 5 | 207 | & | 0.8 | | | | HOR02 |
| 1995 01 31.95 | ! | V | 13.9 | YF | 20.0 | T | 2 | | & | 2 | 4 | | | MIK |
| 1995 02 01.92 | ! | V | 14.3 | YF | 20.0 | T | 2 | | & | 2 | 4 | | | MIK |
| 1995 02 03.60 | | C | 14.3 | HS | 25.4 | T | 6 | | | 0.8 | | | | YOS |
| 1995 02 05.27 | | I[ | 13.5: | | 41 | L | 4 | 183 | | | | | | HAL |
| 1995 02 06.66 | | C | 14.8 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 07.64 | | C | 14.8 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 10.74 | | C | 14.0 | GA | 60.0 | Y | 6 | | | 1.7 | | | | NAK01 |
| 1995 02 10.74 | | c | 16.6 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 02 11.72 | | C | 15.3 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 17.63 | | C | 15.4 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 19.59 | | C | 15.3 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 19.65 | | C | 14.1 | GA | 60.0 | Y | 6 | | | 2.0 | | | | NAK01 |
| 1995 02 19.65 | | c | 16.5 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 02 19.82 | ! | V | 14.8 | YF | 20.0 | T | 2 | | & | 3 | 3 | | | MIK |
| 1995 02 21.64 | | C | 15.7 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 22.64 | | C | 15.5 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 02 24.59 | | C | 13.6 | GA | 60.0 | Y | 6 | | | 2.9 | | | | NAK01 |
| 1995 02 24.59 | | c | 16.1 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 02 27.94 | | S[ | 13 : | AC | 33.4 | L | 5 | 214 | | | | | | SZE02 |
| 1995 03 01.87 | | O[ | 14.8 | HS | 35 | L | 5 | 207 | & | 0.8 | | | | HOR02 |
| 1995 03 04.27 | | S[ | 14.4 | GA | 35.9 | L | 7 | 164 | ! | 0.5 | | | | MOD |
| 1995 03 04.63 | | C | 15.3 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 03 05.20 | | I[ | 13.5: | | 41 | L | 4 | 183 | | | | | | HAL |
| 1995 03 05.97 | | M | 14.7 | AA | 30 | L | 5 | 200 | | 0.5 | | | | POP |
| 1995 03 06.61 | | C | 15.4 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 03 07.59 | | C | 14.9 | HS | 20.0 | L | 4 | | | 0.5 | | | | OOY |
| 1995 03 07.97 | ! | V | 13.5 | YF | 20.0 | T | 2 | | & | 4 | 4 | | | MIK |
| 1995 03 08.65 | | C | 13.7 | GA | 60.0 | Y | 6 | | | 2.9 | | | | NAK01 |
| 1995 03 08.65 | | c | 16.5 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 03 10.30 | | S[ | 13.6 | GA | 35.9 | L | 7 | 164 | ! | 0.5 | | | | MOD |
| 1995 03 19.50 | | C | 13.6 | GA | 60.0 | Y | 6 | | | 2.8 | | | | NAK01 |
| 1995 03 20.82 | | O[ | 14.4 | HS | 35 | L | 5 | 207 | & | 0.7 | | | | HOR02 |
| 1995 03 24.85 | | S[ | 13.5 | AC | 44.5 | L | 5 | 230 | | | | | | SAR02 |
| 1995 03 24.96 | | S | 14.2 | HS | 35 | L | 5 | 207 | | 1.0 | 1/ | | | HOR02 |
| 1995 03 26.24 | | S | 12.8 | NP | 25.6 | L | 4 | 156 | | 2.0 | 0/ | | | MOR |
| 1995 03 28.79 | ! | V | 14.1 | YF | 20.0 | T | 2 | | & | 2 | 8 | | | MIK |
| 1995 03 28.82 | | S | 13.4 | HS | 35 | L | 5 | 207 | | 0.8 | 1/ | | | HOR02 |
| 1995 03 30.86 | | O[ | 13.9 | HS | 35 | L | 5 | 207 | & | 1.2 | | | | HOR02 |
| 1995 04 03.51 | | C | 13.6 | GA | 60.0 | Y | 6 | | | 2.8 | | | | NAK01 |
| 1995 04 03.51 | | c | 16.5 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 04 03.85 | | O[ | 13.8 | HS | 35 | L | 5 | 207 | & | 0.7 | | | | HOR02 |
| 1995 04 26.48 | | C | 13.9 | GA | 60.0 | Y | 6 | | | 2.4 | | | | NAK01 |
| 1995 04 26.48 | | c | 16.7 | GA | 60.0 | Y | 6 | | | | | | | NAK01 |
| 1995 04 26.50 | | C | 13.9 | HS | 25.4 | T | 6 | | | 1.4 | | | | YOS |

Comet 30P/Reinmuth 1 [= 1994p]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 29.47 | | C | 18.4 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |
| 1995 02 17.43 | | C | 18.1 | GA | 60.0 | Y | 6 | | 0.3 | | | 80 | NAK01 |

Comet 31P/Schwassmann-Wachmann 2

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 12 12.42 | | S | 13.4 | AC | 44.5 | L | 4 | 167 | 0.7 | 3 | | | MOR03 |
| 1994 01 09.39 | | S | 12.6 | AC | 44.5 | L | 4 | 167 | 0.8 | 3 | | | MOR03 |
| 1994 01 14.91 | | B | 11.8 | HS | 20.3 | L | 6 | 79 | 2.5 | 3 | | | BIV |
| 1994 01 15.27 | | S | 12.7 | AC | 44.5 | L | 4 | 167 | 0.9 | 3 | | | MOR03 |
| 1994 01 16.11 | | S | 12.4 | AC | 44.5 | L | 4 | 167 | 1.0 | 3 | | | MOR03 |
| 1994 01 16.26 | | B | 11.4 | HS | 20.3 | L | 6 | 79 | 2 | 3 | | | BIV |
| 1994 01 16.95 | | B | 11.8 | HS | 20.3 | L | 6 | 79 | 2 | 4 | | | BIV |
| 1994 01 22.41 | | S | 12.3 | AC | 44.5 | L | 4 | 167 | 1.0 | 4 | | | MOR03 |
| 1994 02 01.08 | | S | 12.1 | AC | 44.5 | L | 4 | 167 | 1.0 | 4 | | | MOR03 |
| 1994 02 05.01 | | S | 11.6 | AC | 44.5 | L | 4 | 80 | 1.6 | 4 | | | MOR03 |
| 1994 02 05.02 | | S | 11.7 | AC | 15 | R | 5 | 62 | 1.7 | | | | MOR03 |
| 1994 02 06.19 | | S | 11.7 | AC | 15 | R | 5 | 62 | 1.8 | 2 | | | MOR03 |
| 1994 02 12.05 | | S | 11.8 | AC | 44.5 | L | 4 | 80 | 1.8 | 4 | | | MOR03 |
| 1994 03 02.07 | | S | 12.5 | AC | 44.5 | L | 4 | 80 | 1.1 | 4 | | | MOR03 |
| 1994 03 12.08 | | S | 12.9 | AC | 44.5 | L | 4 | 167 | 0.8 | 4 | | | MOR03 |
| 1994 03 18.05 | | S | 13.2 | AC | 44.5 | L | 4 | 167 | 1.0 | | | | MOR03 |
| 1994 04 01.06 | | S | 13.9 | AC | 44.5 | L | 4 | 167 | 0.8 | 2 | | | MOR03 |
| 1994 04 02.98 | | B | 12.9 | HS | 20.3 | L | 6 | 79 | 1.5 | 5 | | | BIV |
| 1994 04 15.08 | | S | 14.2 | AC | 44.5 | L | 4 | 167 | 0.8 | 2 | | | MOR03 |
| 1995 04 23.68 | | C | 18.2 | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |
| 1995 05 05.70 | | C | 17.9 | GA | 60.0 | Y | 6 | | 0.35 | | | 300 | NAK01 |

Comet 36P/Whipple [= 1993n]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 22.47 | | C | 18.5 | GA | 60.0 | Y | 6 | | 0.3 | | | 65 | NAK01 |

Comet 44P/Reinmuth 2 [= 1993g]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 01.61 | | C | 13.6 | HS | 20.0 | L | 6 | | 0.9 | | | | ITO02 |
| 1994 10 02.72 | | C | 14.1 | GA | 60.0 | Y | 6 | | 1.2 | | 0.06 | 242 | NAK01 |
| 1994 10 14.71 | | C | 13.6 | GA | 60.0 | Y | 6 | | 2.0 | | 0.05 | 241 | NAK01 |
| 1994 11 23.44 | | C | 14.3 | HS | 20.0 | L | 6 | | 1.0 | | | | ITO02 |
| 1994 11 26.50 | | C | 14.2 | HS | 20.0 | L | 6 | | 1.2 | | | | ITO02 |
| 1994 12 04.51 | | C | 14.4 | HS | 20.0 | L | 6 | | 0.9 | | | | ITO02 |
| 1994 12 05.55 | | C | 14.4 | HS | 41.0 | L | 6 | | 0.3 | | | | KOB01 |
| 1994 12 22.50 | | C | 15.0 | GA | 60.0 | Y | 6 | | 1.0 | | | | NAK01 |
| 1994 12 23.39 | | C | 15.8 | HS | 20.0 | L | 6 | | 0.6 | | | | ITO02 |
| 1995 02 04.43 | | C | 16.0: | GA | 60.0 | Y | 6 | | 0.55 | | | | NAK01 |
| 1995 02 17.42 | | C | 16.7 | GA | 60.0 | Y | 6 | | 0.45 | | | 70 | NAK01 |
| 1995 03 19.44 | | C | 16.7 | GA | 60.0 | Y | 6 | | 0.6 | | | 75 | NAK01 |

Comet 47P/Ashbrook-Jackson [= 1992j]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 10 10.05 | | B | 12.1 | HS | 20.3 | L | 6 | 159 | 1 | 3 | | | BIV |
| 1993 10 25.10 | | B | 12.5 | HS | 20.3 | L | 6 | 159 | 1.5 | 3 | | | BIV |
| 1994 12 27.66 | | C | 18.9 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |

Comet 51P/Harrington [= 1994g]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 09 06.09 | | S | 12.5 | AC | 25.4 | J | 6 | 88 | 2.0 | 0/ | | | BOU |
| 1994 09 07.10 | | S | 12.4 | AC | 25.4 | J | 6 | 88 | 1.8 | 1 | | | BOU |
| 1994 09 14.09 | | S | 12.4 | AC | 25.4 | J | 6 | 88 | 1.8 | 1 | | | BOU |
| 1994 10 02.06 | | B | 12.7 | HS | 20.3 | L | 6 | 79 | 1.5 | 5 | | | BIV |
| 1994 11 30.85 | | 0[ | 13.8 | HS | 35 | L | 5 | 92 | & 1 | | | | HOR02 |

Comet 51P/Harrington [component A]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 10 01.69 | | C | 13.7 | HS | 20.0 | L | 6 | | 0.9 | | | | ITO02 |
| 1994 10 02.72 | | C | 12.7 | GA | 60.0 | Y | 6 | | 1.9 | | 0.10 | 268 | NAK01 |
| 1994 10 14.73 | | C | 12.8 | GA | 60.0 | Y | 6 | | 2.4 | | | 290 | NAK01 |

Comet 51P/Harrington [component A] (cont.)

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 11 06.38 | | | I[13.0: | | 41 | L | 4 | 183 | | | | | HAL |
| 1994 11 23.48 | | | C 14.5 | HS | 20.0 | L | 6 | | 1.0 | | | | IT002 |
| 1994 11 26.52 | | | C 15.2 | HS | 20.0 | L | 6 | | 1.0 | | | | IT002 |
| 1994 12 04.52 | | | C 15.5 | HS | 20.0 | L | 6 | | 0.9 | | | | IT002 |
| 1994 12 22.51 | | | C 16.7 | GA | 60.0 | Y | 6 | | 0.5 | | | 55 | NAK01 |
| 1995 02 04.44 | | | C 18.7: | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |
| 1995 02 17.45 | | | C 19.1 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |

Comet 65P/Gunn

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 05.84 | | | C 17.2 | GA | 60.0 | Y | 6 | | 0.4 | | 1.7m | 298 | NAK01 |
| 1995 01 26.81 | | | C 16.0 | GA | 60.0 | Y | 6 | | 0.6 | | 2.6m | 288 | NAK01 |
| 1995 02 05.93 | ! | V | 16.6 | GA | 36.0 | T | 11 | | 0.3 | 6 | & 1 m | 290 | MIK |
| 1995 02 06.68 | | | C 16.1 | HS | 20.0 | Y | 4 | | 0.5 | | | | OOY |
| 1995 02 07.66 | | | C 16.0 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 17.65 | | | C 16.4 | HS | 20.0 | Y | 4 | | 0.5 | | | | OOY |
| 1995 02 19.62 | | | C 16.0 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 21.66 | | | C 16.3 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 22.67 | | | C 16.2 | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 27.62 | | | C 15.7: | HS | 20.0 | L | 4 | | 0.5 | | | | OOY |
| 1995 02 27.68 | | | C 15.5 | GA | 60.0 | Y | 6 | | 0.8 | | 2.5m | 287 | NAK01 |
| 1995 03 08.67 | | | C 15.5 | GA | 60.0 | Y | 6 | | 0.55 | | | 320 | NAK01 |

Comet 71P/Clark [= 1994t]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 12.21 | ! | C | 17.5 | HS | 36.0 | T | 11 | | 0.2 | 8 | 0.01 | 285 | MIK |
| 1995 02 10.86 | | | C 14.9 | GA | 60.0 | Y | 6 | | 1.0 | | 1.3m | 285 | NAK01 |
| 1995 03 05.45 | | | I[13.0: | | 41 | L | 4 | 183 | | | | | HAL |
| 1995 03 08.82 | | | C 14.3 | GA | 60.0 | Y | 6 | | 1.1 | | | | NAK01 |
| 1995 03 30.16 | | | S 12.6 | AC | 25.4 | J | 6 | 72 | 1.6 | 1 | | | BOU |
| 1995 03 31.12 | | | O[12.7 | HS | 35 | L | 5 | 207 | & 1 | | | | HOR02 |
| 1995 04 01.15 | | | S 12.5 | AC | 25.4 | J | 6 | 72 | 1.6 | 1 | | | BOU |
| 1995 04 03.14 | | | S 12.4 | AC | 25.4 | J | 6 | 72 | 1.6 | 1/ | | | BOU |
| 1995 04 04.14 | | | S 12.5 | AC | 25.4 | J | 6 | 115 | 1.3 | 1 | | | BOU |
| 1995 04 26.77 | | | C 12.0 | HS | 60.0 | Y | 6 | | 1.9 | | | | NAK01 |
| 1995 05 05.79 | a | C | 11.7 | GA | 60.0 | Y | 6 | | 3.0 | | 4.8m | 265 | NAK01 |
| 1995 05 08.77 | a | C | 11.8 | GA | 60.0 | Y | 6 | | 3.0 | | 4.8m | 260 | NAK01 |

Comet 73P/Schwassmann-Wachmann 3 [= 1994w]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 04 03.53 | | | C 19.4 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |
| 1995 04 20.58 | | | C 19.1 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |
| 1995 04 26.49 | | | C 19.0 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |

Comet 77P/Longmore [= 1994q]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 02 10.81 | | | C 17.1 | GA | 60.0 | Y | 6 | | 0.45 | | | | NAK01 |
| 1995 02 27.69 | | | C 16.8 | GA | 60.0 | Y | 6 | | 0.55 | | | | NAK01 |
| 1995 03 08.73 | | | C 16.4 | GA | 60.0 | Y | 6 | | 0.55 | | | | NAK01 |

Comet 95P/Chiron [= (2060) Chiron]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 28.02 | | | I 15.6: | HS | 35 | L | 5 | 207 | | | | | HOR02 |
| 1995 01 29.29 | | | I 15.2 | NP | 41 | L | 4 | 183 | 0.0 | 9 | | | HAL |
| 1995 02 05.34 | | | I 15.2 | NP | 41 | L | 4 | 183 | 0.0 | 9 | | | HAL |
| 1995 03 05.27 | | | I 15.0 | NP | 41 | L | 4 | 183 | 0.0 | 9 | | | HAL |
| 1995 03 20.90 | | | I 15.3: | HS | 35 | L | 5 | 292 | | | | | HOR02 |
| 1995 03 23.84 | | | S 15.2 | HS | 44.5 | L | 5 | 226 | 0.0 | 9 | | | HAS02 |
| 1995 03 24.92 | | | I 15.3: | HS | 35 | L | 5 | 207 | | | | | PLS |
| 1995 03 24.92 | | | I 15.4: | HS | 35 | L | 5 | 207 | | | | | HOR02 |

Comet 95P/Chiron [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 03 28.86 | | I | 15.3: | HS | 35 | L | 5 | 207 | | | | | HOR02 |
| 1995 03 29.91 | | I | 15.6 | AC | 52.0 | L | 4 | 186 | | 9 | | | BOU |
| 1995 03 31.91 | | I | 15.7 | AC | 52.0 | L | 4 | 186 | | 9 | | | BOU |
| 1995 04 02.90 | | I | 15.7 | AC | 52.0 | L | 4 | 186 | | 9 | | | BOU |
| 1995 04 02.95 | | | 15.6 | HS | 44.5 | L | 5 | 230 | | | | | SAR02 |
| 1995 04 03.87 | | I | 15.3: | HS | 35 | L | 5 | 207 | | | | | HOR02 |
| 1995 04 03.93 | | I | 15.7 | AC | 52.0 | L | 4 | 186 | | 9 | | | BOU |

Comet 110P/Hartley 3 [= 1993m]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 11 11.80 | | C | 15.7 | HS | 20.0 | L | 6 | | 0.6 | | | | IT002 |

Comet P/1993 K2 (Helin-Lawrence) [= 1993l]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 22.42 | a | C | 17.9 | GA | 60.0 | Y | 6 | | 0.35 | | | 255 | NAK01 |

Comet P/1993 X1 (Kushida-Muramatsu) [= 1993t]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 02 10.85 | | C | 18.7 | GA | 60.0 | Y | 6 | | 0.25 | | 0.7m | 240 | NAK01 |
| 1995 02 27.75 | | C | 18.6 | GA | 60.0 | Y | 6 | | 0.3 | | | | NAK01 |
| 1995 04 03.58 | | C | 18.5 | GA | 60.0 | Y | 6 | | 0.35 | | | | NAK01 |

Comet P/1994 A1 (Kushida) [= 1994a]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 01 14.95 | | B | 11.6: | HS | 20.3 | L | 6 | 79 | 2.5 | 3 | | | BIV |
| 1994 01 16.24 | | B | 11.4 | HS | 20.3 | L | 6 | 79 | 3 | 2/ | | | BIV |
| 1994 01 16.97 | | B | 10.8 | HS | 20.3 | L | 6 | 79 | 4.0 | 2/ | | | BIV |
| 1994 01 22.41 | | S | 11.8 | AC | 44.5 | L | 4 | 80 | 2.2 | 2 | | | MOR03 |
| 1994 02 01.09 | | S | 10.8 | AC | 44.5 | L | 4 | 80 | 1.8 | | | | MOR03 |
| 1994 02 05.11 | | S | 11.1 | AC | 44.5 | L | 4 | 80 | 2.0 | 4 | | | MOR03 |
| 1994 02 06.20 | | S | 11.2 | AC | 15 | R | 5 | 62 | 2.2 | 2 | | | MOR03 |
| 1994 02 12.14 | | S | 11.3 | AC | 44.5 | L | 4 | 80 | 1.8 | 3 | | | MOR03 |
| 1994 03 02.08 | | S | 12.1 | AC | 44.5 | L | 4 | 80 | 2.0 | 2 | | | MOR03 |
| 1994 03 06.08 | | S | 12.1 | AC | 44.5 | L | 4 | 80 | 1.7 | 2 | | | MOR03 |
| 1994 03 12.09 | | S | 12.8 | AC | 44.5 | L | 4 | 167 | 1.0 | 1 | | | MOR03 |

Comet P/1994 N2 (McNaught-Hartley) [= 1994n]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 22.40 | a | C | 16.6 | GA | 60.0 | Y | 6 | | 0.5 | | | 70 | NAK01 |

Comet P/1994 P1-A (Machholz 2) [= 1994o; component A]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 08 14.93 | | S | 9.5 | AC | 25.4 | J | 6 | 47 | 4.5 | 1/ | | | BOU |
| 1994 08 15.98 | | S | 9.4 | AC | 25.4 | J | 6 | 47 | 5 | 1 | | | BOU |
| 1994 08 17.04 | | S | 9.4 | AC | 25.4 | J | 6 | 47 | 4.5 | 1 | | | BOU |
| 1994 08 17.33 | | S | 9.3 | AC | 11.4 | L | 8 | 40 | 6 | 3 | | | VIE |
| 1994 08 23.34 | | S | 7.5 | AC | 5.0 | B | | 10 | 5 | 3 | | | VIE |
| 1994 08 24.35 | | S | 8.8 | AC | 11.4 | L | 8 | 40 | 3 | 3 | | | VIE |
| 1994 08 29.36 | | S | 8.5 | AC | 5.0 | B | | 10 | 6 | 3 | | | VIE |
| 1994 08 29.37 | | S | 8.2 | AC | 15 | R | 5 | 42 | 4 | 3 | | | MOR03 |
| 1994 08 30.37 | | S | 8.2 | AC | 15 | R | 5 | 42 | 6 | 3 | | | MOR03 |
| 1994 08 31.36 | | S | 8.2 | AC | 5.0 | B | | 10 | 3 | 7 | | | VIE |
| 1994 09 01.12 | | S | 7.2 | AA | 11 | L | 7 | 32 | 4 | 6 | | | VEL03 |
| 1994 09 02.15 | | B | 7.6 | S | 20.3 | L | 6 | 40 | 4.0 | 7 | 0.13 | 305 | BIV |
| 1994 09 03.05 | | S | 7.5: | AA | 11 | L | 7 | 32 | 4 | 4/ | | | VEL03 |
| 1994 09 03.11 | | B | 7.7 | S | 20.3 | L | 6 | 40 | 4.0 | 7 | 0.17 | 305 | BIV |
| 1994 09 03.80 | | S | 7.2 | AA | 10.0 | B | | 20 | 6 | 6 | 0.17 | 300 | YAS |
| 1994 09 04.08 | | B | 8.0 | S | 20.3 | L | 6 | 40 | 5.0 | 7 | 0.18 | 300 | BIV |
| 1994 09 04.31 | | S | 7.8 | AC | 5.0 | B | | 10 | 5 | 4 | | | VIE |

Comet P/1994 P1-A (Machholz 2) [component A] (cont.)

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 09 06.10 | | M | 7.2 | AA | 8.0 | B | | 15 | 4.5 | 6 | 0.25 | 300 | BOU |
| 1994 09 06.37 | | S | 7.4 | AC | 3.5 | B | | 7 | 6.5 | | | | MOR03 |
| 1994 09 07.10 | | B | 8.0 | AA | 11 | L | 7 | 32 | 3.0 | 6 | | | VEL03 |
| 1994 09 07.11 | | M | 7.3 | AA | 8.0 | B | | 15 | 4.5 | 6 | 0.25 | 300 | BOU |
| 1994 09 07.12 | | S | 7.7 | AA | 11 | L | 7 | 32 | 3.0 | 6 | | | VEL03 |
| 1994 09 09.13 | | S | 7.9 | AA | 11 | L | 7 | 32 | 4.8 | 5 | | | VEL03 |
| 1994 09 09.14 | | B | 8.1 | AA | 11 | L | 7 | 32 | 4.8 | 5 | | | VEL03 |
| 1994 09 09.37 | | S | 8.7 | AC | 15 | R | 5 | 42 | 4.5 | 3 | | | MOR03 |
| 1994 09 09.79 | | S | 7.4 | AA | 7.0 | B | | 10 | 5 | 6 | | | YAS |
| 1994 09 10.10 | | M | 7.7 | S | 10.0 | B | 4 | 25 | 10 | 5 | | | LEH |
| 1994 09 10.37 | | S | 8.5 | AC | 15 | R | 5 | 42 | 5.5 | 3 | | | MOR03 |
| 1994 09 11.35 | | S | 8.7 | AC | 15 | R | 5 | 42 | 5 | 3 | | | MOR03 |
| 1994 09 12.12 | | B | 8.2 | AA | 11 | L | 7 | 32 | 4 | 3 | | | VEL03 |
| 1994 09 12.12 | | S | 8.2 | AA | 11 | L | 7 | 32 | 4 | 3 | | | VEL03 |
| 1994 09 12.31 | | S | 8.2 | AC | 5.0 | B | | 10 | 4 | 3 | | | VIE |
| 1994 09 14.11 | | S | 8.6 | AC | 25.4 | J | 6 | 47 | 3 | 2/ | | | BOU |
| 1994 09 18.38 | | S | 8.9 | AC | 15 | R | 5 | 42 | 4 | 2 | | | MOR03 |
| 1994 09 28.14 | | S | 9.3 | AA | 25.4 | J | 6 | 58 | 3.0 | 2 | | | BOU |
| 1994 10 02.11 | | S | 9.1: | AA | 11 | L | 7 | 32 | 2 | 2 | | | VEL03 |
| 1994 10 02.34 | | S | 10.0 | AC | 15 | R | 5 | 42 | 3.5 | 2 | | | MOR03 |
| 1994 10 02.83 | | M | 10.0 | HS | 16.0 | W | 4 | 49 | | | | | TSU02 |
| 1994 10 03.39 | a | S | 9.2 | AC | 31.7 | L | 6 | 68 | 2.7 | 3 | | | BOR |
| 1994 10 04.52 | | S | 9.5 | S | 20 | T | 10 | 63 | 2.4 | 1 | | | PRY |
| 1994 10 06.10 | | S | 10.5: | GA | 11 | L | 7 | 40 | 3 | 3 | | | BAR06 |
| 1994 10 07.39 | | S | 9.4 | AC | 31.7 | L | 6 | 68 | 2.5 | 3 | | | BOR |
| 1994 10 08.39 | | S | 10.5 | AC | 44.5 | L | 4 | 80 | 1.4 | 2 | | | MOR03 |
| 1994 10 09.09 | | S | 10.6 | GA | 11 | L | 7 | 40 | 3 | 3 | | | BAR06 |
| 1994 10 10.01 | | S | 10.9 | GA | 11 | L | 7 | 40 | 2.5 | 3 | | | BAR06 |
| 1994 10 11.38 | | S | 10.6 | AC | 44.5 | L | 4 | 80 | 3.0 | 2 | | | MOR03 |
| 1994 10 11.39 | | S | 10.0 | AC | 31.7 | L | 6 | 68 | 2.6 | 2 | | | BOR |
| 1994 10 12.40 | | S | 9.9 | AC | 31.7 | L | 6 | 68 | 2.6 | 2/ | | | BOR |
| 1994 10 12.40 | | S | 10.6 | AC | 44.5 | L | 4 | 80 | 2.4 | 2 | | | MOR03 |
| 1994 10 13.38 | | S | 9.9 | AC | 31.7 | L | 6 | 68 | 2.5 | 2 | | | BOR |
| 1994 10 13.84 | | S | 11.1 | HS | 41.0 | L | 6 | 80 | 2 | 2 | | | KOB01 |
| 1994 10 14.78 | | C | 11.5 | HS | 20.0 | L | 6 | | 3.0 | | | | ITO02 |
| 1994 10 14.82 | | S | 10.4 | HS | 41.0 | L | 6 | 80 | 4 | 2 | | | KOB01 |
| 1994 10 14.82 | a | C | 11.7 | GA | 60.0 | Y | 6 | | 3.8 | | >0.14 | 295 | NAK01 |
| 1994 10 15.40 | | S | 10.9 | AC | 44.5 | L | 4 | 80 | 2.6 | 1 | | | MOR03 |
| 1994 10 16.40 | | S | 10.2 | AC | 31.7 | L | 6 | 68 | 2.5 | 1 | | | BOR |
| 1994 11 06.50 | | S[ | 12.5 | AC | 41 | L | 4 | 72 | 3 | | | | HAL |

Comet P/1994 P1-D (Machholz 2) [component D]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 09 06.12 | | S | 12.0 | AC | 25.4 | J | 6 | 88 | 4 | 0/ | | | BOU |
| 1994 09 10.38 | | S | 12.0 | AC | 44.5 | L | 4 | 80 | 1.5 | | | | MOR03 |
| 1994 09 28.14 | | S | 9.6 | AA | 25.4 | J | 6 | 58 | 2.7 | 1/ | | | BOU |
| 1994 10 02.40 | | S | 11.5 | AC | 44.5 | L | 4 | 80 | 1.9 | 2 | | | MOR03 |
| 1994 10 03.39 | a | S | 9.7 | AC | 31.7 | L | 6 | 68 | 1.9 | 1 | | | BOR |
| 1994 10 07.39 | | S | 10.1 | AC | 31.7 | L | 6 | 68 | 2.0 | 0 | | | BOR |
| 1994 10 08.41 | | S | 12.5 | AC | 44.5 | L | 4 | 167 | 1.3 | 1 | | | MOR03 |
| 1994 10 11.38 | | S | 12.7 | AC | 44.5 | L | 4 | 167 | 1.1 | 2 | | | MOR03 |
| 1994 10 11.39 | | S | 11.0 | AC | 31.7 | L | 6 | 68 | 2.0 | 0 | | | BOR |
| 1994 10 12.40 | | [ | 11.0 | AC | 31.7 | L | 6 | 68 | | | | | BOR |
| 1994 10 12.40 | | S | 12.7 | AC | 44.5 | L | 4 | 167 | 1.1 | 0 | | | MOR03 |
| 1994 10 14.80 | | C | 14.1 | HS | 20.0 | L | 6 | | 1.2 | | | | ITO02 |
| 1994 10 14.83 | a | C | 13.3 | GA | 60.0 | Y | 6 | | 2.6 | | 0.08 | 293 | NAK01 |

Comet P/1994 X1 (McNaught-Russell) [= 1994u]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994 12 16.63 | | C | 16.9 | HS | 41.0 | L | 6 | | 0.16 | | | | KOB01 |
| 1994 12 23.64 | a | C | 16.1 | GA | 60.0 | Y | 6 | | 0.45 | | | | NAK01 |
| 1994 12 27.68 | | C | 16.2: | HS | 60.0 | Y | 6 | | 0.45 | | | | NAK01 |

Comet P/1994 X1 (McNaught-Russell) [cont.]

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 26.65 | a | C | 16.6 | GA | 60.0 | Y | 6 | | 0.5 | | | | NAK01 |
| 1995 02 24.50 | a | C | 17.8 | GA | 60.0 | Y | 6 | | 0.45 | | | | NAK01 |

Comet P/1995 A1 (Jedicke)

| DATE (UT) | N | MM | MAG. | RF | AP. | T | F/ | PWR | COMA | DC | TAIL | PA | OBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1995 01 26.68 | | C | 18.7 | GA | 60.0 | Y | 6 | | 0.25 | | | 250 | NAK01 |
| 1995 02 21.60 | | C | 19.5 | GA | 60.0 | Y | 6 | | 0.25 | | | 235 | NAK01 |
| 1995 02 24.54 | | C | 19.3 | GA | 60.0 | Y | 6 | | 0.25 | | | 240 | NAK01 |
| 1995 03 20.48 | | C | 20.0 | GA | 60.0 | Y | 6 | | 0.25 | | | | NAK01 |

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**Designations of Recent Comets**

Listed below, for handy reference, are the last 25 comets to have been given provisional letter designations in the old system (pre-1995) or designations in the new system (as of 1995 May 25). The name, preceded by a star (⋆) if the comet was a new discovery (compared to a recovery from predictions of a previously-known short-period comet). Also given are such values as the orbital period (in years) for periodic comets, date of perihelion, $T$ (month/date/year), and the perihelion distance ($q$, in AU). Four-digit numbers in the last column indicate the *IAU Circular* (4-digit number) or *Minor Planet Circular* (5-digit number) containing the discovery/recovery announcement.

| *Old* | | | *New-Style Designation* | $P$ | $T$ | $q$ | *IAUC* |
|---|---|---|---|---|---|---|---|
| 1994a | = | ⋆ | P/1994 A1 (Kushida) | 7.4 | 12/12/93 | 1.4 | 5918 |
| 1994b | = | | 86P (Wild 3) | 6.9 | 7/21/94 | 2.3 | 5933 |
| 1994c | = | ⋆ | C/1994 E1 (Mueller) | | 12/28/93 | 1.8 | 5948 |
| 1994d | = | ⋆ | C/1994 E2 (Shoemaker-Levy) | | 5/27/94 | 1.16 | 5962 |
| 1994e | = | | 89P (Russell 2) | 7.4 | 10/27/94 | 2.3 | 5967 |
| 1994f | = | ⋆ | C/1994 G1 (Takamizawa-Levy) | | 5/22/94 | 1.4 | 5974 |
| 1994g | = | | 51P (Harrington) | 6.8 | 8/23/94 | 1.57 | 5982 |
| 1994h | = | | 115P (Maury) | 8.7 | 3/18/94 | 2.0 | 5984 |
| 1994i | = | ⋆ | C/1994 J2 (Takamizawa) | | 6/29/94 | 1.95 | 5986 |
| 1994j | = | | 16P (Brooks 2) | 6.9 | 9/1/94 | 1.8 | 5988 |
| 1994k | = | ⋆ | P/1994 J3 (Shoemaker 4) | 14.5 | 10/14/94 | 2.9 | 5991 |
| 1994l | = | | 19P (Borrelly) | 6.9 | 11/1/94 | 1.4 | 6009 |
| 1994m | = | ⋆ | C/1994 N1 (Nakamura-Nishimura-Machholz) | | 7/12/94 | 1.14 | 6013 |
| 1994n | = | ⋆ | P/1994 N2 (McNaught-Hartley) | 20.8 | 12/8/94 | 2.5 | 6014 |
| 1994o | = | ⋆ | P/1994 P1 (Machholz 2) | 5.2 | 9/18/94 | 0.75 | 6053 |
| 1994p | = | | 30P (Reinmuth 1) | 7.3 | 9/3/95 | 1.9 | 6072 |
| 1994q | = | | 77P (Longmore) | 7.0 | 10/9/95 | 2.4 | 6084 |
| 1994r | = | ⋆ | C/1994 T1 (Machholz) | | 10/2/94 | 1.8 | 6091 |
| 1994s | = | | 22P (Kopff) | 6.4 | 7/2/96 | 1.6 | 6111 |
| 1994t | = | | 71P (Clark) | 5.5 | 5/31/95 | 1.6 | 6112 |
| 1994u | = | ⋆ | P/1994 X1 (McNaught-Russell) | 18.2 | 9/7/94 | 1.3 | 6115 |
| 1994v | = | | 116P = 1994 V1 (Wild 4) | 6.2 | 8/31/96 | 2.0 | 6121 |
| 1994w | = | | 73P (Schwassmann-Wachmann 3) | 5.3 | 9/22/95 | 0.93 | 6122 |
| | | ⋆ | P/1995 A1 (Jedicke) | 14.3 | 8/15/93 | 4.1 | 6124 |
| | | | 117P (Helin-Roman-Alu 1) | 9.6 | 3/27/97 | 3.7 | 24597 |

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**New Observations Report Form**

On the following page is a new report form that observers should use when contributing photometric data on paper to the *ICQ* for possible publication and inclusion in the archive. Note that the columns are in the same location as the data are entered into the computer and also as they appear in tabulated form in the *ICQ*. As per the new format, two new columns have been added to this new form: the notes "n" (after the date) and "N" (after the coma diameter) — the former being for extinction notes, etc., and the latter being for descriptions of the comet's condensation (to be discussed in the July *ICQ*).

# Comet Observation Report Form

This form is intended for use by observers contributing data on paper to the *International Comet Quarterly (ICQ)*. Only one comet should be given on each sheet. If comments/remarks are lengthy, they should be put on the reverse side of this sheet. Please type (or print clearly). Make additional copies by photocopying. Send forms to Daniel Green, M.S. 18; Smithsonian Observatory; 60 Garden St.; Cambridge, MA 02138; U.S.A.

The date should be given in Universal Time as year, month, date (with the date given to 0.01 day). *[version 1/5/95]*

**Comet:** _____

**Observer/postal address:** _____

| Date (UT)* | n | MM* | $m_1$* | Ref.* | Ap. (cm)* | T* | $f$/* | ×* | Dia.* (′) | N | DC | Tail | p.a. | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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* (required for tabulation in the *ICQ*)